

ZHAW – Zürcher Hochschule für Angewandte Wissenschaften

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MSc in International Business

# **Master-Thesis**

*From YouTube to protein powder: How Social Media influences the  
consumption and perception towards nutritional supplements*

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## Management Summary

Posting selfies, showing pictures from the latest workout, and sharing the supplements that help with getting an “Adonis” physique – the Social Media influencer is born. Such occurrences have shaped Social Media in recent years from a networking platform to a multi-million-dollar business platform. Every day, thousands of pictures and videos of a seemingly perfect life are uploaded with one major goal: influencing the consumers in a way to generate sales for the nutritional supplement industry. One group of individuals that is considered to be highly affected by it, is the Generation Y, due to their digital affinity and high presence on Social Media. Therefore, the purpose of this paper is to analyze the consumer of nutritional supplements and extent that Social Media has on the consumer behavior of nutritional supplements based on the various areas of the consumer buying cycle.

The analysis has shown that the consumer behavior differs when nutritional supplements are purchased under the influence of Social Media. Not only is it able to change the perception and opinion towards nutritional supplements in a positive way, it also influences the consumer in the way nutritional supplements are purchased. It was found out that the main purpose for supplementation are deficits in nutrition and weight control and that Social Media is able to generate sales if detailed information about products are provided, as well as positive reviews are given. A key driver for the selection of the product was stated to be the product quality, followed by the value for money. Lastly, there were indications that the increased usage of Social Media would influence the expenditures and consumption frequency of supplements, however, these could not be identified to be statistically significant. Furthermore, it can be said that Social Media and its business channels and influencers are able to act as opinion leaders and influencers in the field of nutritional supplements.

The analysis of this paper was conducted with the use of an internet based survey consisting of quantitative and qualitative research instruments and achieved 353 total participants through snowball sampling. The survey included two groups of individuals for the comparative analysis, a control group (n=252) that has never purchased supplements through Social Media before and a research group that has purchased dietary supplements influenced by such platforms (n=156).

Under to the prevailing circumstances, it is recommended that companies active in the nutritional supplement industry do in fact establish active presence on Social Media. It is of importance for them to produce quality products at a reasonable price and provide the consumers detailed information about such and to place them with the use of Social Media influencers that can act as opinion leaders. Also, it is recommended to establish direct connections to online shops for the purchase of nutritional supplements, as they were found to be the main place of purchase in connection with such platforms.

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# 1 Introduction

With the rise of the digitalization, new means of marketing have been established both for companies but also for private persons. Today, the everyday life can be documented on Social Media platforms such as Facebook, Twitter or YouTube. Be it just a selfie from holidays to impress friends and relatives or an important launch of a new product or service, they have one thing in common: It can be posted on Social Media and makes it possible for everyone to reach millions of people around the globe.

There is no doubt that this trend has affected the entire world: In 2015, more than ten million user accesses to Social Media sites have been made in Switzerland every month and by almost half of the Swiss population. However, this trend was not only observable in Switzerland, but has rather affected societies across the world: Since 2010, the consumption of Social Media has increased by 241%, from 0.97 billion to 2.34 billion and is considered to further increase (eMarketer, n.d.).

With such a popularity, it is therefore no surprise that numerous industries have followed this trend and have increased their marketing activities on Social Media. One of these industries which has appeared to profit from Social Media marketing is the fitness industry (incl. nutritional supplement industry). Until recently, fitness could have been a synonym for niche activities such as bodybuilding or powerlifting, but today it has achieved a different meaning: Healthy nutrition, positive lifestyle, wellbeing and success, comes through staying in shape with working out. At the latest with the rise of Facebook, YouTube and Instagram as self-expressionistic information sharing platforms, the fitness industry discovered new means of marketing and distribution: Influencers, fitness models and fitness (in a broader sense) Social Media channels. This has helped various fitness and dietary supplements companies to implement new business models based on Social Media and increase their business performance continuously throughout the years (Heitner, 2014).

These influencers, also referred to as “Instagram stars” or “YouTube stars” can be private persons from all over the world with a long range of viewers, who post content related to the fitness industry on a regular basis. With their pictures or videos, product placements and/or recommendations are made, opinions shared or even products sold, which can influence the buying decision of many viewers. These promotion methods have granted numerous companies increasing sales and profits during the last few years (Heitner, 2014).

Furthermore, where consumers were once mostly influenced by well-known retailers or trusted shops in their area, today they rely heavily on recommendations from friends or other opinion makers

(Forbes L., Vespoli E., 2013). However, it is not yet known to what extent Social Media has an influence on the buying decision and recommendation of the consumers of such content, especially in the context of nutritional supplements (also known as dietary supplements).

## **1.1 Problem definition**

With rise of Social Media platforms such as YouTube and Facebook and the latest with the invention of the smartphone, consumers and companies were given new opportunities and possibilities of interacting and advertising and promoting products. One prominent example in relation to social media and marketing is the video sharing platform YouTube. YouTube is an internet video community founded in 2005, which allows registered users to post, view, comment, share and link to videos on the site. In 2017, it was the second most visited website in worldwide, with over one billion monthly page visitors who watch beyond six billion hours of video content, and are strongly engaged in liking, sharing, and commenting on videos. In addition, YouTube claims to have more than 100hours of new video content uploaded every minute on this website (Milad et. al, 2016, Bradshaw, Garrahan, 2008). Furthermore, young generations between the ages of 18 and 34 years who make up two-thirds of the YouTube users, were shown to prefer watching YouTube videos over any cable TV (Perrin, 2015).

Today, YouTube contains masses of information and insights regarding markets and consumption. With the introduction of the smartphone, 22 countries and numerous cell phone companies, such as Apple with the iPhone and RIM with Blackberry, were offered a customized version via application by YouTube, which would make it possible to smartphone owners to watch YouTube videos through their device (Bradsha, Garrahan, 2008). The suddenly widespread consumption of this platform has brought new opportunities for advertisers for designing and implementing advertisement strategy (Nielsen, 2012). Additionally, YouTube launched its so called “partner program”, in which content creators are given the opportunity to monetize their work, by allowing advertisements to be added to their videos by YouTube (YouTube, 2017). This allowed benefits for all the parties: advertising companies, YouTube and content creators.

However, not only YouTube was able to create new means of advertisement, but also other Social Media platforms have jumped on this trend like Facebook or Instagram (Instagram is owned by Facebook). These companies have created substantial tools for marketing in today’s world (Facebook, 2017), and what distinguishes Facebook and Instagram from traditional advertisements in the internet is the ability to create personas. Since one of the core functionalities of Facebook and Instagram are the creation of pages and profiles for individuals, companies or even fictional characters, with which people are able to interact with, new means of personification of brands were created (Ginsberg,

2015). With tools such as Instagram or Facebook (other platforms may offer the same or similar applications), companies are able to personify their brand and products and share values, characteristics and emotions beyond regular marketing tools.

An industry that has benefited substantially by these marketing measures is the fitness and health industry, particularly the nutritional supplement industry. This industry is highly prominent and active on Social Media and promotes their products through various measures, one of which being the placement and recommendation of products via Social Media influencers. In this context, multiple fitness channels (also called profiles) engage millions of followers worldwide, with advises about fitness, nutrition, nutritional supplements and other lifestyle areas in order to achieve a healthy and positive lifestyle. Differently than with brand ambassadors, that are often famous individuals such as actors or music artists, these profiles are also managed by ordinary people, who post their efforts on the way to a “perfect” body (Ferreira, 2017).

In the nutritional supplement industry, the influencers generally represent individuals with “attractive” (this is subject to personal opinion) physical appearance that may address a “perfect” lifestyle and body, that was achieved with the help of certain nutritional supplements. This may address the imagination of an “ideal” personification of the target group of the consumers of those products. Figure 1 provides an example of how the product placement or recommendation may look like with the example of an Instagram and YouTube post. As visible in the Instagram post, the influencer actively promotes certain nutritional supplements for a brand which they are sponsored by (visible in the post description). However, other than with regular advertisements, through the networking aspect of Social Media, the influencer is able to invite the followers to participate in interaction through commenting or liking the pictures. This may provide the followers a certain degree of closeness to the influencer, which may increase the involvement in the person and the product.

Figure two provides another example of how influencers may act on YouTube. Special emphasis is made on the video description, where the audience of the video is given the opportunity to purchase nutritional supplements by using promotional codes that are affiliated to the influencer (also see chapter 2.2.2.)



Figure 1: Example of a post of a Social Media influencer promoting nutritional supplements of the brand "Nocco" (Instagram, 2017).





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*Figure 2: Swiss Fitness Model Anja Zeidler acting as Influencer on YouTube for the brand "Myprotein" (YouTube, 2017)*

An additional topic that has increasingly become relevant in relation to Social Media is the group of individuals called "Generation Y". Because of their affinity towards the internet and interconnectedness via Social Media (which also gives them the name "Digital Natives"), presence on social networking sites such as Facebook or Instagram is amongst the highest worldwide. In a study conducted by InSites Consulting, it was found out that 80% of the Digital Natives worldwide log in to Social Media platforms every day (InSites Consulting, 2012). In addition, the consumption of lifestyle content such as luxury, sports and nutrition has become widely accepted within this generation, which makes them a favorable target for companies and Social Media influencers active in those industries (Greenhill & Partners, 2012). This has been also observed widely within the family and environment of the author, as it has been noted that nutritional supplements are widely accepted and consumed by this generation.

The aim of this paper is therefore to analyze what influence Social Media has on the consumption of nutritional supplements and to identify how the consumers perceive such products.

## 1.2 Term definitions

To further lay down the basis and terminology for this thesis, background information and the definitions of the major topics of this thesis are explained in detail.

### 1.2.1 Social Media

Social Media is a term that was created around the year 2004 with the increased popularity of internet platforms such as Facebook or Myspace (Kaplan, Haenlein, 2010). The term originally derived from information technology instruments called “Social Software” (also referred to as “Web 2.0”), which defines technical tools for the application of social data processing (Hettler, 2010). In order to provide a definition of Social Media, the origins of the term are explained in detail to provide a deeper understanding of the functionalities and characteristics of Social Media.

#### 1.2.1.1 Social Software

In a narrower definition, Social Software includes various online platforms such as web blogs, wikis, photo sharing platforms but also networking sites such as Xing or LinkedIn. In a broader perspective, it may also include file sharing systems such as Dropbox, Google Drive or instant messaging applications such as the smartphone app WhatsApp or similar (Hettler, 2010). Furthermore, it offers functionalities that can be recognized as the baseline of Social Media. Giving the opportunity to express themselves and contribute to a network or a group of people (Raabe, 2007). Conclusively, it can be said that such interaction may product a dynamic exchange of (personal) information and is therefore able to create a social environment.

Richter and Koch (2007) describe the functionalities of Social Software to be threefold:

- **Information management (content creation):** Contribution of information and making it available to third-parties for discussions, review, evaluation along with others.
- **Identity management (interacting):** Opportunity of self-expression of opinions, interests etc. on the internet.
- **Relationship management (networking):** Establishing and management of potential, new and existing relationships.

Today, the term Social Software has lost its importance and is almost fully replaced by the term Social Media. This may also be a consequence of identity management and relationship management characteristics having gained on importance, thus representing the most prominent characteristics of Social Media (Hettler, 2010).

In addition to the above-mentioned characteristics of Social Media, Obar (2015) has defined the challenges of the terminology of Social Media to be twofold: Firstly, the speed with which information is transmitted and developed through information technology. As Social Media platforms can be accessed through various PC and mobile device based applications which are under continuing development and subject to fast paced innovation, this additionally challenges the terminology because the status quo of Social Media adjusts rapidly to its environment (Obar, 2015). Secondly, Social Media includes functionalities for data and information transfer that can be considered as similar as regular ways of communication such as e-mail, instant messaging or the telephone (Obar, 2015).

Obar (2015) has further described the following four characteristics of Social Media in today's world:

1. Social Media are internet platforms in the context of Web 2.0<sup>1</sup>
2. Where users can view, generate and edit own content or contribute to others' (content creation and interaction)
3. with tools, mechanics, and a platform provided by Social Media service providers
4. and where the functionalities of the Social Media platform support the content creation, development and relationship management of social groups and networks (networking)

#### **1.2.1.2 Own definition**

While reviewing the definition of Social Software from Richter and Koch (2007), it can be said that the core functionalities of *information management*, *identity management*, and *relationship management* can still be seen congruent with Obar's definition of Social Media. These aspects have become tools for today's business practices in terms of marketing, CRM<sup>2</sup> and distribution. This, however, is dependent on Social Media sites that put special emphasis on the networking characteristic (interacting with other people) such as Facebook or Instagram.

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<sup>1</sup> Web 2.0 describes the characteristic of the internet, where not only data can be viewed, but also contributed (O'Reilly T., 2005).

<sup>2</sup> Customer Relationship Management

Following the mentioned definitions from Obar (2015) and from Richter and Koch (2007), the definition of Social Media for this paper shall be following:

*Social Media (plural) are internet platforms which allow users worldwide to instantly **create content and interact with each other** (be it via PC or mobile or other internet capable devices), by using tools and mechanics which are provided by the platform provider.*

Based on this definition, the term Social Media in this paper shall be understood as platform for the social networking between individuals/companies and other persons (ie. Facebook, Instagram, Twitter, etc.).

### 1.2.2 Nutritional supplements

Technology has not only helped to produce high efficient products using nanotechnology (i.e. TVs and Computer monitors), but also to purposely separate different elements, minerals and food products from another, so-called micro- and macronutrients (Grivetti, Applegate, 1997; World Health Organization, n.d.). These nutritionals are essential for the body to provide the basic body functions and can be found in every kind of food and drink available (without exception). The World Health Organization (WHO) defines micronutrients as follows:

*„Called micronutrients because they are needed only in minuscule amounts, these substances are the “magic wands” that enable the body to produce enzymes, hormones and other substances essential for proper growth and development. As tiny as the amounts are, however, the consequences of their absence are severe.” World Health Organization (n.d.).*

On the other hand, macronutrients are the basic nutrients obtainable through food and beverage such as lipids (fat), proteins and carbohydrates, which are required in “large” amounts (hence the term “macro”) in order to cover the daily caloric intake and provide the body with energy (Bundesamt für Lebensmittelsicherheit und Veterinärwesen, 2016).

With the rise of technology, mankind was able to separate these nutrients from certain sources and to be used as supplements for the individual nutrition. Today, there are various forms of nutritional supplements. However, the U.S. Food and Drug Administration includes the following substances in their definition (U.S. Food and Drug Administration, 2015):

- Vitamins
- Minerals
- Botanicals
- Amino acids
- Concentrates, metabolite, constituents, extracts
- Dietary substances in addition to the regular dietary intake

Though there is scientific evidence that micronutrients were consumed separately already in the ancient Greece, most of the nutrients were digested through regular food and beverages. However, with the increased knowledge of nutrition and biomechanics from the 20th century, these nutrients were increasingly offered separately and the nutritional supplements were invented (Grivetti, Applegate, 1997). Today, dietary supplements are used by people from various backgrounds and for purposes such as for health reasons or by athletes for the support of their activities (Bailey et al., 2013). They can be found in various forms like tablets, capsules, soft gels, powders or other. (U.S. Food and Drug Administration, 2015).

Worldwide, the consumption of dietary supplements was subject to increase for the last few years, mainly because of an increased interest in health and diets from the consumers. However, medical therapeutic factors such as medical treatment by doctors have further increased the demand for dietary supplements, as they have been seen to recommend nutritional supplements in some situations in order to stay healthy (Persistence, 2015).

As for the worldwide market for dietary supplements, it is expected to increase by 4% by the year 2018, mainly driven by protein supplements (which are very common in the fitness industry) and fish supplements (Euromonitor International, 2013). Other studies expect the global nutritional supplements industry to reach a new peak of USD 278.08 billion by the year 2024 (Sherry J, 2016). Figure 3 provides an overview of the expected worldwide growth rates of nutritional supplements.

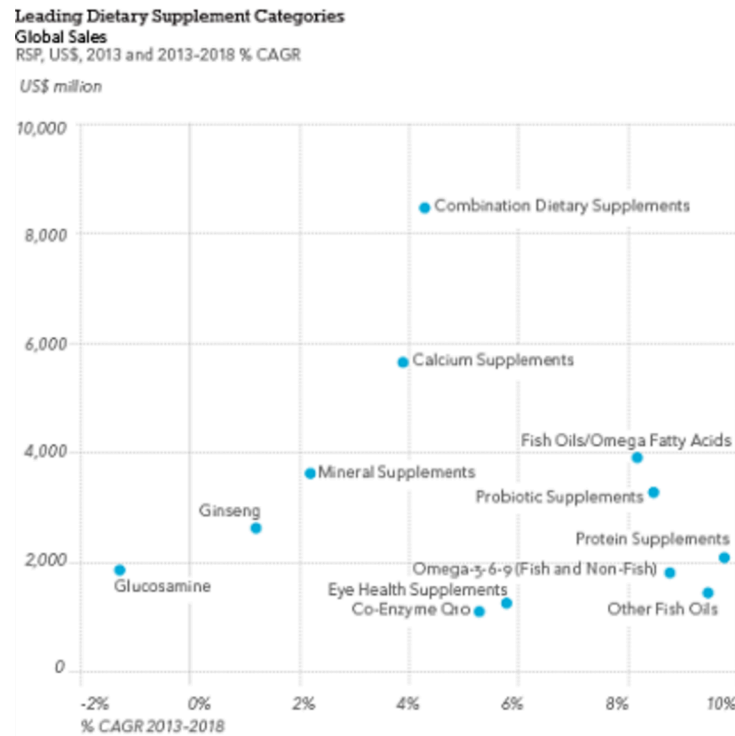


Figure 3: Leading dietary supplements categories based on global sales (Euromonitor International, 2013)

As shown in the report by Euromonitor International (2013), the majority of the nutritional supplements are subject to growth, with lipids and protein supplements on the lead.

As for Europe Additionally, a study by Persistence Market Research (n.d.) estimates the compound annual growth rates (CAGR) of nutritional supplements until 2020 to be the following:

- Global sports supplements: CAGR of 9.1% - Market value of USD 12.5bn
- Global lipids supplements: CAGR of 13.1% - Market value of USD 4.5bn
- Global mineral supplements: CAGR of 7.3% - Market value of USD 14.5bn
- Global botanical supplements: CAGR of 7.5% - Market value of USD 0.9bn
- Global sports nutrition: CAGR of 9% - Market value of USD 37.7bn

This shows that there is substantial demand for nutritional supplements from various sources and for various fields of application and that it is subject to increase in the upcoming years.

### 1.3 Domain limitation

In this chapter, the domain of this master thesis is described to provide a specified understanding of the scope of the paper.

The aim of this paper is to identify the extent of the influence on Social Media on the consumer behavior towards nutritional supplements. Therefore, the following three main topics are addressed in this study: **Social Media** and **consumer behavior** towards **nutritional supplements**.

The research regarding Social Media does not limit itself in a certain selection of Social Media platforms and therefore includes the understanding of Social Media as a superordinate topic (see term definition). However, in order to narrow down the research, a selection of three Social Media channels is done for the analysis (see chapter 3). In addition, only the influence of posts, videos and live-broadcasts on Social Media are considered in this paper. This means that technical aspects of the platforms as well as the access of the consumer to the Social Media sites are not considered in this study. Additionally, no analysis of the specific content and content creator on Social Media that is used by the consumer is done.

Furthermore, in this paper, the research focuses on the influence of publications, placements and recommendations of nutritional supplements of any kind on Social Media. This means that no distinction of consumed content is made in this case and it is disregarded in the analysis whether the consumer was influenced to purchase supplements by a recommendation, product placement or similar.

In terms of consumer behavior, the research is limited to various areas along a customer buying cycle and does not include other aspects of consumer behavior (see chapter 2). In this case, the following aspects are researched: awareness phase, purchase phase and after-sales phase. The respective operationalization of these areas is described in the methodology in chapter 3.

In terms of nutritional supplements, no special focus on a certain group of supplements is done and all kinds of supplement may be included in this study. Furthermore, dietary supplements can be divided into different fields of application or purposes. While dietary supplements are commonly used to get certain health benefits, there is a sizable demand for them from athletes, which use them to enhance sports performance. Even though they might be used for other purposes, they are still considered nutritional supplements, which is why no distinction (in terms of definition and domain) will be made in this paper.

Lastly, market growth and other macroeconomic analysis is not scope of this paper. However, managerial implications and recommendations are provided at the end of this paper. Summarizing, the following limitations are done:

- Analysis of the influence of Social Media
- on consumer behavior
- within the product category “nutritional supplements”

## **1.4 Research Objective**

In this thesis, the emphasis on the influence of international Social Media individuals on the consumption of dietary supplements will be analyzed. The aim is to identify the motivation, influence, perception as well as frequency of consumption and expenditures for such products in order to create personas and derive managerial implications and recommendations for the industry.

## **1.5 Research Question**

Based on the research gaps and the research objectives, the question of how consumers of nutritional supplements can be characterized arises. In addition, the consumer behavior based on specific models pertaining to the theory shall be analyzed. This leads to the following research questions:

### **Research Question One**

- How can consumers of nutritional supplements be characterized?

### **Research Question Two**

- How does the consumption of Social Media affect the way of consumption with regards of nutritional supplements?
  - Does it influence the motivation for supplementation?
  - Does it influence the place of purchase of supplements?
  - Does it increase/decrease the frequency of supplementation?
  - Does it create a certain trend in types of dietary supplements?
  - Does it influence the consumer spending for dietary supplements?



## 1.6 Hypotheses

The hypotheses are based on the research questions as described in chapter 1.5 as well as on the background information about Social Media and the consumer behavior of nutritional supplements and are therefore described as follows:

Because of the rising number of individuals consuming Social Media and following content related to nutrition, sports and fitness and therefore possibly the admiration of an “ideal” individual, it is assumed that nutritional supplements are consumed for different reasons than under normal circumstances.

**H1: There is a different kind of motivation for supplementation if Social Media is used.**

The second hypothesis is based on the current trend of digitalization and purchasing online and through Social Media:

**H2: Nutritional supplements purchased under the influence of Social Media are mainly purchased through online stores.**

The third hypothesis is also based on the assumption that through the usage of specific content on Social Media incorporating an “ideal” individual that uses nutritional supplements, consumption of nutritional supplements is higher.

**H3: Nutritional supplements that are purchased because or through Social Media are consumed in a higher frequency.**

The fourth hypothesis is based on the assumption that nutritional supplement companies might put special emphasis on a certain kind of product for economic reasons, which is why it is expected that there is a certain trend of nutritional supplements consumed under the influence of Social Media:

**H4: Consumers purchase different kinds of nutritional supplements under the influence of Social Media.**

Lastly, it is assumed that people who consume nutritional supplements under the influence of Social Media spend more, which leads to the following hypothesis:

**H5: Expenditures for nutritional supplements are higher if purchased under the influence of Social Media.**

## 2 Literature Review

In the following chapter, literature related to the topics that are included in this master thesis will be presented. The purpose of this chapter is to provide fundamental information about the topics of this paper as well as to set a fundamental ground of information that will be used for the creation of the survey. As this study is analyzing the influence of Social Media (and its mechanisms and capabilities for marketing) on the consumption and perception of nutritional supplements, there are four major theories topics that are included in this thesis:

1. **Social Media** as a system
2. **Social Media Marketing** as marketing tool that influences potential or existing consumer
3. **Influencers** as modern brand ambassadors for companies active on Social Media
4. **Consumer behavior** as the field of research in this study
5. **Nutritional supplements** as the scope of products under consideration for this study

The upcoming chapters will therefore provide theoretical background based on literature about the topics described above.

### 2.1 Social Media

In this chapter, the current research about Social Media and its implications on business and consumer shall be explained.

Today, Social Media has proven to be more than just a tool for amusement, but rather an additional interlinkage between marketers and consumers. It can be described as a means of communication, participation and cultivation amid an interconnected and interdependent system of individuals, companies but also communities, that are complemented by technical capabilities and mobility (Tuten, Solomon, 2015).

In a more detailed view, an additional aspect of Social Media is that it caters to various aspects of society. As much as it can be used as entertainment, it can be used as a news platform or business, but also for bringing together people of similar interests, thus creating communities. These various areas are also known as “channels” within the internet-terminology. Solomon and Tuten (2015) have clustered these various channels into four so called “Social Media Zones”: Social Entertainment, Social Community, Social Commerce and Social Publishing. Figure 4 provides a visualization of the various zones of Social Media:

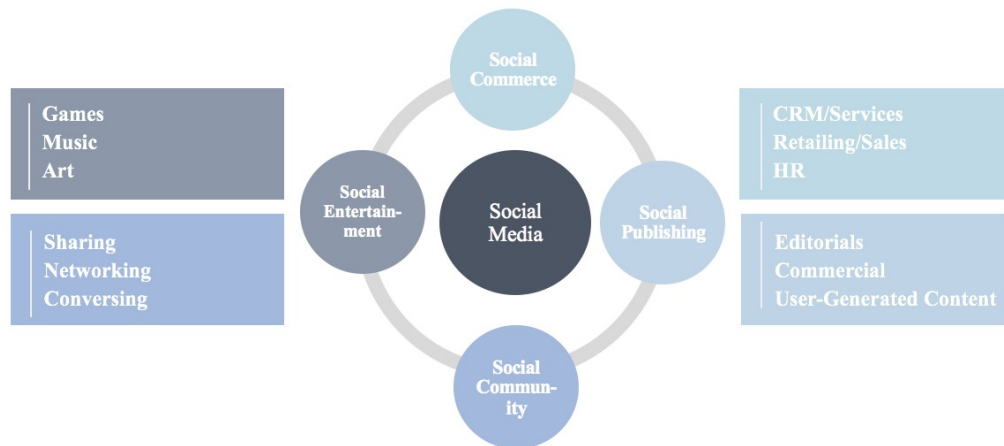


Figure 4: The 4 Zones of Social Media (Tuten and Solomon, 2015) – own visualization

Due to the nature of Social Media being a medium with multiple and shared purposes and multiple fields of application for both individuals and companies, two or even more zones may overlap.

In the upcoming sub-chapters, detailed information is provided about the four different zones.

### 2.1.1 Social Community

What describes social community sites are the capabilities of the platforms to enable establishing relationships amongst users. This includes not only conversations with other people, but also the creation, management, maintenance and collaboration of social groups, social activities and other communities with shared concerns, passions or identification. Examples of Social Communities are social networking sites such as Facebook, Google+, Twitter or LinkedIn. In general, the core functionalities of social communities are the following (Tuten, Solomon, 2015):

- Social Identity
- Social presence
- Connections
- Social utility

**Social Identity** describes the functionality of creating an online profile of an individual, company or any other fictional character that allows the sharing of basic information and customization of the own profile i.e. with pictures.

**Social presence** is described as activities within a social community that provide information about the individuals mood, friends, status or other information about their current situation.

**Connections** are followers, fans or friends who interact with each other and share their content via various different means such as direct chats, comments, direct messages, or other similar ways of interaction, both synchronous and asynchronous.

Because of the far-reaching nature and capabilities of social networking sites such as Facebook, they are not necessarily described as such anymore, but rather as **social utility** sites, as they include all the Social Media zones as described in this chapter.

Older platforms of Social Media are forums, that provide moderated discussions based on a subject, and “wikis”, which provide self-created content and information about certain topics.

### **2.1.2 Social Publishing**

Social Publishing platforms are sites that aim at providing a stage for the sharing of text as well as visual medias such as pictures, videos etc. Blogs are the most well-known type of social publishing as they can be created by every individual and promoted as an “own” website. These blogs are considered to be social as they can be shared with other individuals and provide space for open discussions about them on the same platform. Well-known social publishing sites are for example Blogspot for blogs, but also YouTube for media sharing or iTunes or Soundcloud for audio sharing (Tuten, Solomon, 2015)

### **2.1.3 Social Commerce**

With the rise of Social Media, new ways of distribution have risen, too. Social Commerce therefore focuses on the commercialization of services and products through the use of Social Media platforms. This includes direct online shopping through Social Media, advertising, rating and reviews but also customer support (Tuten, Solomon, 2015). Instagram or Facebook for example provide business accounts with the opportunity to link their online-stores to their Social Media account, which provides them the opportunity to sell certain products directly from the platform. In addition, paid advertising of such platforms provides marketers efficient ways to target the right audience and combine marketing and sales in one single tool (Facebook, 2017).

### **2.1.4 Social Entertainment**

While the previous zones are focused on the sharing of media, news and the interaction between individuals, social entertainment provides the opportunity for entertainment through gaming, gamification or virtual worlds (i.e. through creating fictional videogame worlds in which users may interact with each other). Facebook includes a large variety of social entertainment activities with built-in

videogames such as FarmVille or CandyCrush Saga. Other sites such as MySpace focus on more traditional types of entertainment with sports, music and various types of art (Tuten, Solomon, 2015).

Summarized, Social Media does consist of four major zones which are interrelated and not mutually exclusive. This means that some of the Social Media zones may influence the other or contain various aspects of the other zone, depending on the actual implementation in a business process.

## **2.2 Social Media Marketing**

Social Media is described as online websites that provide the possibility to individuals and business for interaction, content creation and networking through various digital means. These means may include videos, blogs, live-chats but also pictures, direct messaging etc. These characteristics of Social Media have led to society being interconnected heavily through websites such as Facebook, Instagram, Twitter or LinkedIn, to just mention a few. Interests and opinions are shared throughout these platforms with other users such as hobbies, products, services or reviews, which on the other hand has led to companies becoming active in Social Media. Because of the importance of Social Media in today's society, a large part of marketing communication and promotion has transitioned from printed-media to online advertisements. (Solomon, 2015).

In addition, nowadays Social Media can be accessed through various means such as personal computers and tablets, but most importantly, smartphones, which makes it possible for them to reach consumers from "anywhere" and therefore increase their presence and reach. This sheer "omnipresence" of content for the consumer created the need for "Social Media Optimization", that can be considered the vanguard for the term Social Media Marketing. Social Media Optimization is a means of optimizing content created in Social Media to make it more accessible and more transparent for users to reach and collect information. By optimizing the content, businesses active on Social Media would increase their reach as the content would be distributed to the right target audience more efficiently and effectively (Solomon, 2015, Bhargava, 2010).

Social Media Optimization as a measure would eventually lead to the marketing strategic approach of Social Media Marketing. Today, Social Media Marketing is understood as "the utilization of social media technologies, channels, and software to create, communicate, deliver and exchange offerings that have value for an organization's stakeholder" (Tuten, Solomon 2015).

### 2.2.1 Field of Application of Social Media Marketing

Social Media Marketing's central functionalities include the creation of content, reviews, advertisements and interaction with customers and followers. Through the social community and social commerce aspects of Social Media, it supports market research in various ways: through collection of feedback from followers and (potential) customers, through sales analysis and marketing controlling and monitoring (through provided data analysis from the Social Media platforms). In addition, through influencer generated content, it can be used as a tool for achieving its own marketing goals. Moreover, since Social Media is exposed to technical and social development, it can also be used as propulsion for innovation within a company. Lastly, one of the key functions of Social Media leads to a key determinant for Social Media Marketing: Communication and interaction with followers and customers for the collection of feedback, product reviews, providing of customer support but also acquisition of customers (Hettler, 2012).

Summarized, it can be said that Social Media and its Marketing implementation contributes to various areas within a company, mainly marketing and distribution, research and development as well as innovation management and customer relationship management. Because of the nature of Social Media affecting various areas within the value chain of a company, it creates an interrelation the mentioned areas. Figure 5 visualizes the various fields of application for social media and the consequential interrelation of those areas:

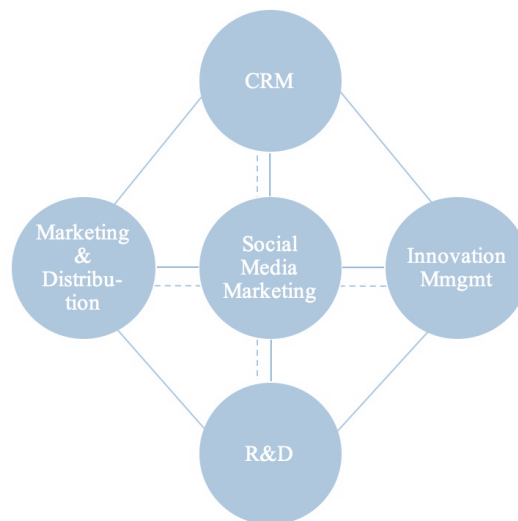


Figure 5: Visualization of application of Social Media Marketing and the subsequent interrelations (own visualization).

### 2.2.2 Influencer Marketing

With the increasing popularity of Social media, Influencer Marketing has become an increasingly prominent tool for Social Media Marketing. As the topic of Influencer Marketing is considered a relatively modern topic, literature is limited to news articles and other non-scientific and un-peer reviewed publications. Even though literature about Influencer Marketing is relatively rare, it can be said that it is derived from the word of mouth marketing as well as the concept of brand ambassadors (The South Agency, 2017, Goldener, 2016).

There are currently no theoretical models which describe a certain process for influencer marketing, which is why it is assumed that the underlying theories are based on general concepts from social sciences such as marketing and consumer behavior. Since this topic is not thoroughly described yet, there is currently no common ground on a definition of Influencer Marketing. Therefore, before providing an own definition, information about the concept and its functionality are given based on observations or research papers.

One of the main aspects of Influencer Marketing is the personification of a brand. This procedure is not exclusive to one single individual (in this case the influencer), but the brand can be impersonated by several people. This means that individuals with a high reach<sup>3</sup> on Social Media will get contractually sponsored by a company, for which the influencer then commits himself to post content about the product. This can take place by actively reviewing products, actively and passively placing products in their videos/pictures, but also by just delivering content which goes in line with the values and goals of the specific sponsor, such as videos/pictures portraying a certain lifestyle or values. It can be expected that the Social Media users consume these kinds of contents for various reasons as described in the *chapter 2.1 – Social Media*: For self-entertainment (Social Entertainment), sharing and publishing of opinions (Social Publishing), creation of fan bases, communities and know-how centers (Social Community) and for shopping and or information gathering (Social Commerce).

The described diversity of content suggests that Social Media active brands are using their personalized profiles to demonstrate their multidimensional personalities. In a study conducted by Goor (2012), it was proposed that these identities are best illustrated when the brand names, products, and related events are displayed. On the other side, a study by Ginsberg about Instagram (2015) suggested that such attributes do not necessarily require the active illustration of the products, but the attributes can be also promoted through other means such as lifestyle content. With lifestyle content, companies

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<sup>3</sup> A general number of followers/fans could not be identified, which is why it estimated that the number of followers is perceived to be rather subjective.

are able to represent brand values and attributes that would not be seen through regular product advertising approaches, and therefore allow higher degrees of customization and individualization of a brand. Often, a deeper depiction of a brand's identity can be provided. This is done by creating content about personal interests, values, and activities or personal experiences etc. Therefore, it can be said that influencer channels aim at providing a certain degree of friendship, inspiration, creativity or social attitude, with the help of visual and acoustic effects. These findings by Ginsberg create a focal point on the theme of personification: Influencer help to humanize a brand and create a more genuine and human-oriented approach in customer interaction.

However, Influencer Marketing is not only a tool that benefits the underlying companies: In many cases, the influencer is paid for the brand-specific content creation. It is expected that the recompense is subject to individual contractual agreements, however, observed remuneration systems throughout Facebook, Instagram and YouTube generate the commissions through specific internet links or codes that are linked to the respective influencer (aka affiliate links or promotion codes). Consumers are then able to purchase products with a discount and in return, the influencer receives a commission for every sale released through the described means (Technopedia, 2017).

Summarizing, it can be said that Influencer Marketing is implemented by companies to individualize and humanize a brand in order to provide brand values and attributes to the consumers in a more friendship-like manner.

## **2.3 Consumer Behavior**

### **2.3.1 Theory origins**

The term and theory of "Consumer Behavior" derived from different schools of marketing from the early to mid 1900's. Bartels (1962) first documented the classic views on marketing theory that significantly influenced the theory of Consumer Behavior and divided them into three main sections: The commodity school, the functional school as well as the institutional school (Sheth, 1985). The commodity school focused on the items subject to a specific market transaction, also known as the "convenience-shopping-specialty" classification of goods as per Copeland (1923) (Weitz, Wensley, 2006). The focal point in the functional school of marketing, on the other hand, was set on the activities of a market transaction i.e. the classification or distribution of goods. Lastly, the institutional school of marketing based on Weld (1916) concentrated on middlemen in marketing tasks such as middle men, agents, sales persons etc. and how they interact and implement marketing activities (Weld, 1916 in Shaw & Jones, 2005). These early concepts in the history of marketing theory were



mainly influenced by concepts of demand theory in microeconomics and other trading and economic geographic theories from the early 20th century (Sheth, 1985):

Early history of consumer behavior included research methods, theories, and substantial know-how in areas such as consumption economics (essential goods vs. luxury, household costs etc.), retail patronage (financing, retailing, retail set up), and in self-service concepts. Instead of setting the focus on the collective market behavior, individual customers were analyzed in the context of a market place. In the end, this resulted in substantial knowledge about consumer behavior such as the following which are still prominent in today's studies: brand loyalty, opinion leadership, demographic segmentation on the basis of socioeconomic conditions and life cycle phases of households.

This individual customer analysis was then complemented by behavioral sciences, which in the end, would lead to consumer behavior being based on behavioral and social sciences.

### **2.3.2 Prevailing definition of consumer behavior**

The term "consumer behavior" includes a larger variety of fields (compared to its origins) related to the behavior of a customer (i.e. individuals, groups, but also companies) during the purchasing process including its preceding and subsequent phases. Today, in general, consumer behavior answers the question to how consumers apply products to define their identity in various contexts (Solomon, 2015). Even though consumers are considered to be heterogeneous, the research of consumer behavior aims at identifying individual behavior amongst consumers and to analyze the same occurrence in larger groups to identify homogeneity. Today, the consumers are analyzed based on three areas of consumer behavior: Consumers as individuals, consumers as decision-makers and consumers and their subcultures (Solomon, 2015).

#### **2.3.2.1 Consumer as Individuals**

According to Solomon (2015), in terms of the individual behavior of consumers, this area is mainly focused on identifying consumer perception, learning and memory, motivation and values, the self as well as personality, lifestyle and attitude and opinions. This concept is heavily based on behavioral studies and aims at identifying the cognitive and spiritual mechanics within an individual that lead to a certain consumption behavior. Popular models within this area are the sensory process that describes the various external stimulus on the five basic human senses and how they can be translated into marketing to create awareness and interpretation by the consumer. This area also includes the theory of consumers being a "black box", which describes the customer characteristics and the decision-

making process of a customer (Keegan, Moriarty, Duncan, 1992). This leads to the next area of consumer behavior, the consumer as decision-maker.

### 2.3.2.2 *Consumers as Decision-Makers*

This phase is mainly focused at identifying the drivers and stages within a decision-making process for a purchase, how they are influenced by third parties and how the result is evaluated (Solomon, 2015).

The black box as mentioned in the previous chapter, also visualized and interpreted as a “customer buying cycle”, describes the various areas a customer undergoes in the process of a purchase and consists of three main areas (Kotler, 2000): Awareness phase, the purchasing phase and the after-sales phase.

The **awareness phase** consists of three stages in which a potential customer is made aware of a specific desire or product. This situation can be created or supported by various means as shown below (Schlichter, 2009):

Creation of awareness/creation of need	Collection of information	Evaluation of alternatives
<ul style="list-style-type: none"> <li>• Public Relations</li> <li>• Advertisements (incl. online)</li> <li>• Mailings</li> <li>• Word of mouth</li> </ul>	<ul style="list-style-type: none"> <li>• Journals</li> <li>• Websites</li> <li>• Blogs</li> <li>• Media</li> <li>• Social Advertisements</li> </ul>	<ul style="list-style-type: none"> <li>• Reviews</li> <li>• Opinions from influencers, friends and family</li> <li>• Product comparison</li> <li>• Websites for price comparison</li> </ul>

*Table 1: Areas of a customer buying cycle (own visualization)*

In the **purchasing phase**, the customer decides to purchase a specific product, either through an offline sales channel or online. In this phase, it is considered to be crucial to provide efficient and simple sales processes for the completion of the purchase.

The **after sales phase** is the situation where the consumption of a product or services takes place. It consists of the consumption stage, where the consumer uses the product or service. The decision whether it fulfills its requirements defined in the awareness phase is then made. The second stage within this phase is the contact stage, also described as “follow-up” stage, where consumers are provided with supplementary services to generate additional sales and therefore, increase customer loyalty. The next figure provides a visualization of the consumer buying cycle:

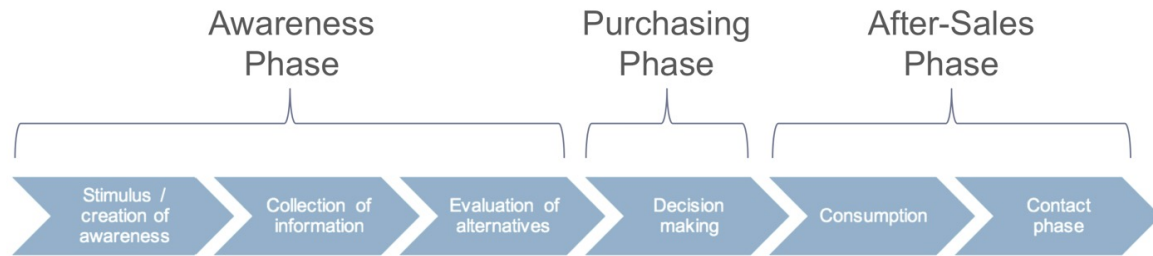


Figure 6: Customer buying cycle based on Schlichter (2009) - own visualization

In this case, the degree of effort in collecting information and evaluating alternatives is highly influenced by the level of habitualization of the purchase, which describes the extent of the routine of the purchase. This means, the higher the routine, the more is a purchase considered to be habitualized. The lower the routine, the higher the degree of information search and evaluation. Figure 7 provides an overview about the types of decision making (Solomon, 2015):

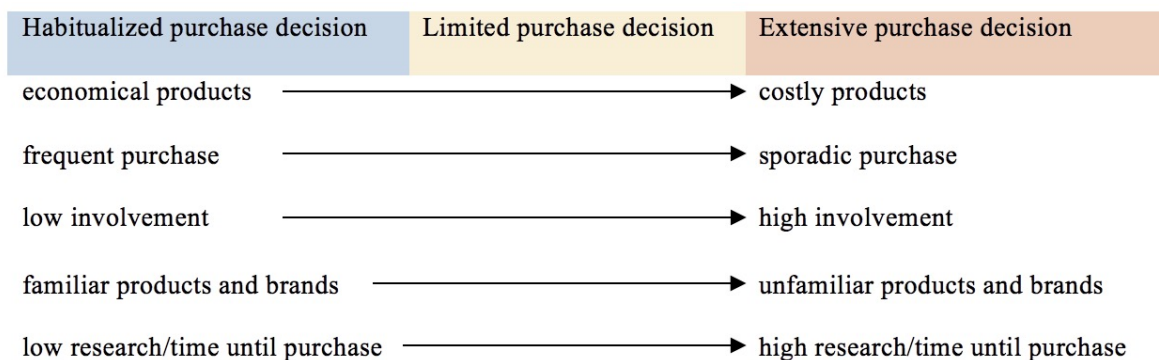


Figure 7: Continuum of purchase decision making, based on Solomon (2015) - own visualization

### 2.3.2.3 Consumers and Subcultures

While the other areas of consumer behavior focused rather on individual processes, the last area targets the external factors that influence the social identity, which in return, influences the consumer behavior.

Throughout the entire development of mankind, the human has always lived in groups, societies, with one or more persons of reference. This encouraged people to adapt, follow other individuals and act based on collectivistic perceptions (Pennisi, 2011). These social behaviors are a result of external factors influencing the perception, values and interests of a person, of which also consumer behavior is affected (Burnkrant, Cousineau, 1975). In order to distinguish the various forms of social influences, Solomon (2015) divides the main external social factors on consumer behavior into three areas: Reference groups, opinion leaders and word of mouth.

**Reference groups** are described as real or imaginary individuals or groups that bear the potential to substantially influence decisions, behavior and/or interests of other people (Whan Park, Parker Lessing, 1977). The researchers Whan Park and Parker Lessing (1977) found out the extent of their influence to be determined by three factors. First, the informational influence that describes that a consumer gathers information from other individuals. Secondly, the utilitarian influence that describes that consumer behavior is determined by perceived third-party expectations about the consumer. Lastly, the value-expressive influence, that describes that consumers might act based on the expected increase in self-esteem and reputation through a purchase.

As for **opinion leaders**, these are described as individuals with a high degree of power in influencing buying decision (Holbrook, Addis, 2007). Most of the time, these opinion leaders are considered to be family and friends/acquaintances or other close individuals. However, the status of opinion leader is not exclusive to such, but may also be transferred to other individuals such as famous individuals or experts. Opinion leaders are important sources of information as they are considered to have a high degree of social power (Solomon, 2015):

- They are technically versed and can have the same influence as an expert (Barton, 1985).
- They investigate and review product information and therefore may have unbiased superior knowledge (Menzel, 1981)
- They are socially active and have established a network within a group or society (Venkatraman, 1989).
- They are usually early adopters and therefore have a lead in information about products

That said, opinion leaders have a high degree of significance for companies as they might influence a consumer's buying decision substantially.

Lastly, **word of mouth (WOM)** has been mentioned to be an additional key influencer of buying decisions. Word of mouth is described as the "informal circulation of (product)information from one (potential) consumer to the other. As most of the time, the information is propagated by a person of trust, it generally perceived to be of higher value compared to official marketing channels. In addition, word of mouth is considered to be connected to peer-group pressure, which increases its power of influence (Arndt, 1967). In addition, in today's world, WOM is repeatedly mention in connection with Social Media (see chapter "Social Media"), as it provides consumers with the opportunity to

spread information rapidly and beyond geographical barriers. This has created the necessity for companies to be actively involved in Social Media to be able to increase control of both positive and negative information to consumers.

To summarize, it can be said that subcultures, social constructs and collective knowledge can have a compelling impact on consumers, that as a consequence, is able to influence their perceptions and buying decisions.

## **2.4 Generation Y**

Since a large part of the consumers of Social Media are considered to be of the age generation from 1982 to 2002, this chapter is dedicated on providing a basic overview of this generation.

Generation Y, also referred to as “Millennials” are defined as the generation with birth years between 1982 and 2002 (Bolton et al., 2013). A key characteristic of this generation is their affinity to technology, the internet and digital media which has granted them the name of “Digital Natives” (Prensky, 2001). Further to that, since they grew up in a rather favorable economic environment, they demonstrate a high purchasing power and increased spending on goods<sup>4</sup>, including luxury goods and services and, compared to other generations like the Baby Boomers, are willing to pay the full price for goods (Greenhill, Partners, 2012). Due to their comparatively young age, the majority of the Generation Y have not yet reached their peak in buying power, which increases the importance of focusing marketing efforts towards this generation (BCG, 2014).

The said technological affinity of the Digital Natives further leads to a high consumption of mobile and internet capable devices, which offers the opportunity to attract this generation’s attention by providing products and services online (Sox, Kline and Krews, 2014). Furthermore, individuals belonging to the Generation Y are considered to have grown up in highly protective environments and under a high degree of attention and security provided by their parents, connected to a high sense of instant gratification (Atkinson, 2008).

Lastly, Generation Y is considered to having a high influence on the consumer market: Millennials not only provide a new paramount in terms of market and requirements, they are also estimated to influence the older generations’ consumer behavior towards a more technology-oriented approach (Eastman, Iyer and Thomas, 2013).

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<sup>4</sup> Their consumer spending increased by 31% between 2011 and 2012 (Greenhill, Partners, 2012)

## 2.5 Nutritional Supplements

With regards to nutritional supplements, there are numerous studies conducted in this field, however, such studies include medical approaches which are not scope of this study. Accordingly, as consumer behavior is a key underlying topic of this thesis, literature for nutritional supplements is focused on theory considered to be bordering topic of consumer behavior. Subsequently, the motivational factors influencing the consumer behavior of such products is taken into consideration for this thesis.

In a German study from 2010, researchers analyzed various fields of application of nutritional supplements. As a result of the study, various motivational factors for supplementation were identified. The institute identified that “life balancing” is the key determinant motivational factor, however, life balancing is again perceived differently. Therefore, the motivational factors were stratified in to various levels. Figure 8 provides a visualization of the various motivational factors for supplementation (Katalyse Institute, 2010):

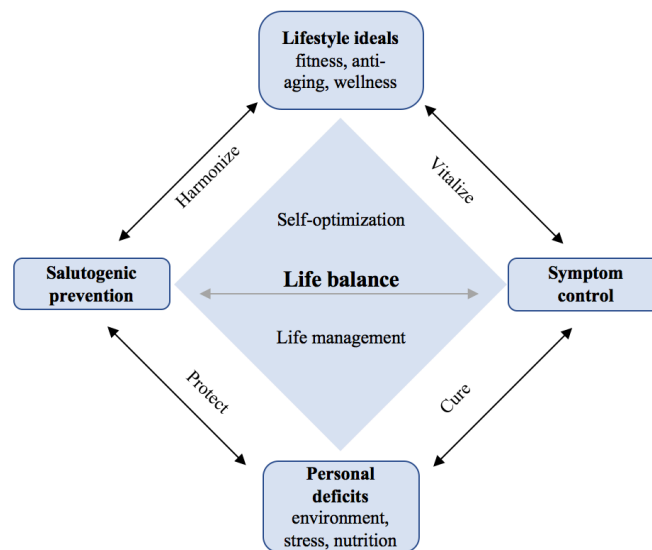


Figure 8: Visualization of the motivation for dietary supplements (Katalyse Institute, 2010) – own visualization

As visible in figure 8, the actual self-optimization and life management that create the life balance, are determined by various motivational factors such as symptom control in cases of illness, Salutogenic prevention as prophylaxis measure to prevent illnesses, as well as personal deficits in health caused by nutrition, stress or environment. Lastly, there is also the aspect of lifestyle ideals such as fitness, anti-aging or general wellness that catalyst nutritional supplementation. These factors create an interrelation as they might overlap depending on the individual.

## **2.6 Research gaps**

Based on the background information in chapter 1 literature review in chapter 2, it can be said that all the research areas of this paper show significant importance based on its social acceptance and research status.

Even though Social Media and consumer behavior are considered to be rather well researched, a definite specific research focusing on the influence factors of Social Media on various areas of consumer behavior has yet to be conducted. In addition, even though nutritional supplements have been analyzed and researched thoroughly in the medical field, little research was done considering consumer behavior regarding dietary supplements. Moreover, Social Media nowadays appears to be one of the key driver for the marketing of dietary supplements industry, however, little information about the influence on the consumer behavior is available.

### **3 Research Design and Methodology**

In this chapter, the design of the research for this master thesis is explained in detail, as well as the methodology that is applied to collect the relevant data and analyze it.

#### **3.1 Research Design**

This study follows a mixed method approach between quantitative and qualitative analysis with the use of an electronic questionnaire aimed at a specific target group that is addressed via snowball sampling.

The research is conducted with the use of an e-survey created on [esurveycrator.com](https://www.esurveycrator.com) using a premium-account that is provided by the Zurich University of Applied Science. The survey is shared and spread via common Social Media channels such as Facebook, Instagram and YouTube, as well as through Social Media influencers in the fields of nutritional supplements and fitness on the respective channels. Detailed information about the channels are given in the upcoming chapters 3.1.1.

Moreover, the survey was shared and spread via E-Mail, the smartphone app “WhatsApp” as well as through word of mouth. Lastly, the survey was published on several nutritional and sports directed forums as well as offline-stores for nutritional supplements in Switzerland. Additional information about the respective means of spreading the survey can be found in the chapter 3.2.

##### **3.1.1 Pre-survey arrangements**

Before the survey was conducted, a set of pre-arrangements were done in order to set a suitable environment for the spreading of the survey. These pre-arrangements included the setting up of Social Media channels, acquiring followers and notifying them about the study that is being conducted with a focus on Social Media and its influence on nutritional supplements. In order to do so, Social Media channels were selected by on their popularity in Switzerland and their capabilities regarding the sharing of information and interaction with followers. For that purpose, Instagram and Facebook were chosen. The upcoming sup-chapters will provide detailed information about these channels and their purpose.

###### ***3.1.1.1 Instagram-Channel***

Because the survey of this paper would be spread on Social Media using a snowball sampling method, an Instagram account was created for the purpose of acquiring a foundation of followers. The Instagram account was created on 28. April 2017 with the name “@renggram” (acronym of Renga, author



of this paper, and Instagram). The channel's purpose was to spread awareness of this study and create a basis of followers willing to engage in participating at the survey. Numerous posts related to nutritional supplements were done in order to increase the number of followers, create awareness about and, involve them in the topic of the study (see figure 9).



Figure 9: First post on the Instagram-Channel created for this Master-Thesis (own design).

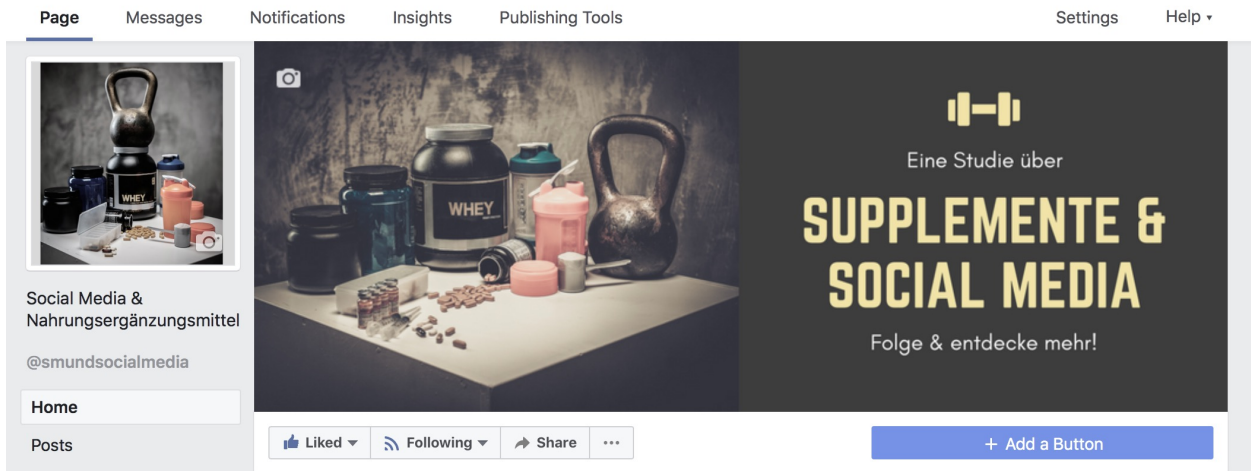
By the end of the study, the Instagram account had 665 followers. The survey was first published on 18.07.2017 with various posts (available in annex).

### 3.1.1.2 Facebook-Page

In order to acquire a substantial number of followers prior to the launch of the survey, a two-step approach was taken to build up the Facebook-Page related to the study for this thesis.

As a first step, a private Facebook page in the name of the author was created. By interacting and following friends, colleagues and other acquaintances, a foundation of followers could be achieved. The Facebook profile was created on 28. April 2017 with the name “Giuseppe Renga” and had 293 Friends (Status 31.08.2017).

Once the private Facebook profile was created, a Facebook Page dedicated to this study was created by the author. The Facebook page is called “Social Media & Nahrungsergänzungsmittel”, which translates from German to “Social Media and nutritional supplements” (<https://www.facebook.com/smundsocialmedia/>) and has achieved a total of 20 likes and followers until 31.08.2017. The page was also accessible through the short-access nickname “@smundsocialmedia”. An overview of the Facebook page is provided in figure 10.



*Figure 10: Facebook-Page set up for the purpose of this study.*

The page was set up in German, as the questionnaire was published mainly in the German-speaking part of Switzerland as well as other German speaking countries in Europe.

In addition to having created the Facebook page, posts were made that explained the purpose and the idea behind the mentioned Facebook page. The purpose of the posts was to create awareness about the topic of this master thesis and eventually create awareness about the survey that was launched. Furthermore, all the posts were created using templates for Social Media posts using the platform canva.com, where free and purchasable pictures are provided including a use license (Canva, 2017).

The full documentation of all the posts can be found in the annex.

## **3.2 Methodology**

### **3.2.1 Survey-Platform**

The study was conducted using an internet based survey using mixed methods such as categorical questions (nominal data) as Likert scales with ranges from 1 (lowest score) to 5 (highest score). For the creation of the survey, the platform of eSurvey Creator ([www.esurveycreator.com](http://www.esurveycreator.com)) was used. This survey platform was chosen because a premium access is granted if the registration is done via the faculty of Zurich University of Applied Sciences. The premium access gave the possibility to use additional types questions, layout-tools, workflows and analysis tools that would not have been possible on a regular account.

### **3.2.2 Sampling**

The survey pertaining to this study follows a snowball sampling approach (also referred to as “convenience sampling”). This sampling approach is characterized by its nature of being published: It is based on referrals made by people who share similar characteristics or know others who would possess the attributes in scope of the research (Biernacki, Waldorf, 1981). In today’s digital context, this may mean that a survey is sent to numerous individuals that in return, spread it again to other individuals, creating a chain-reaction and therefore multiplying the number of potential participants for a study.

Because there is data available that provides factual numerical data about the population of Social Media users involved in the consumption of nutritional supplements, this sampling approach was chosen. As a goal for this study, a number of 500 participants was set in order to increase representativeness and extrapolation to a whole population.

### **3.2.3 Publishing approach**

The survey was published via the Social Media channels as described in chapter 3.1, but also presented in respective forums to place the survey directly to the right audience. The number of Social Media channels through which the survey was published was set to three. The reason for this lays in the sampling method as described in chapter 3.2.2. Because of the snowball sampling and under the consideration of the investments to spread the survey, it was expected that the answer rate would be sufficient if the survey was spread on three channels only.

The selection of the Social Media platforms is made based on the published active user accounts for each platform. The analysis of the active user accounts has shown the following results:

### Active Users of Key Social Media Platforms

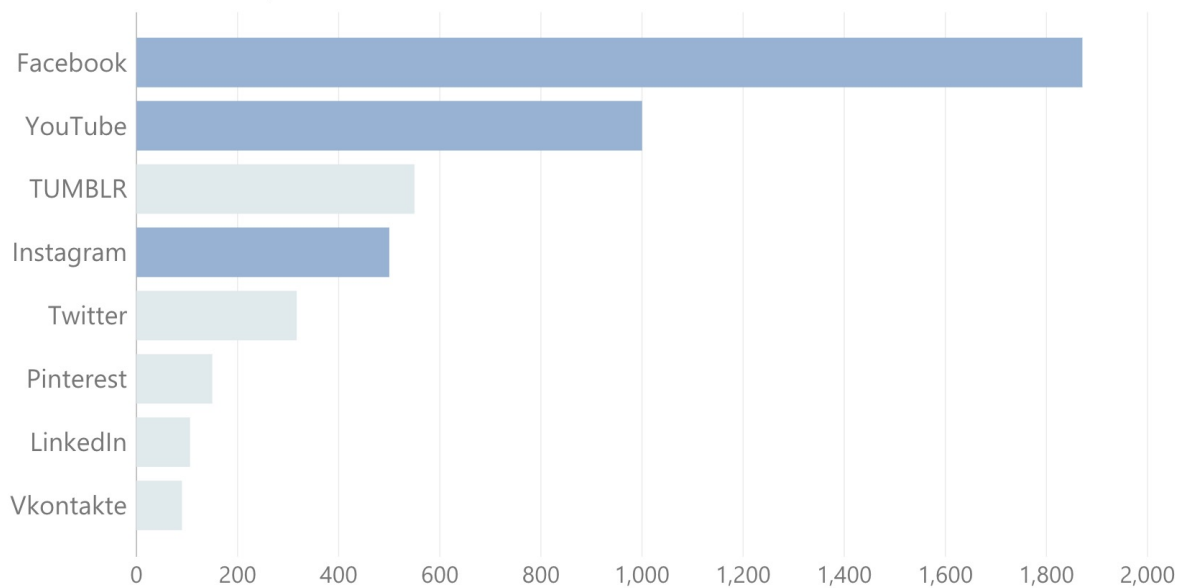


Figure 11: Number of users (in millions) on Social Media platforms (WeAreSocial, 2017) – own visualization

Following the logic of the definition of Social Media as developed in chapter 1, Tumblr can be ignored for this study as it is considered to be closer to the definition of a blog and therefore does not meet the requirement for this paper. For that reason, the following Social Media platforms remain as publishing platforms of this paper (highlighted in figure 11):

1. Facebook
2. YouTube
3. Instagram

While the spreading of the survey via Facebook and Instagram was done through the creation of channels by the author of this thesis (see chapter 3.1), additional promotion was done with the help of Social Media influencers. The influencers were contacted via Social Media Platforms such as Instagram, Facebook and direct messages on YouTube. The selection of the influencers was then done on the following basis:

1. Definition of keywords<sup>5</sup> (“nutritional supplements, dietary supplements, influencer, fitness, bodybuilding, supplements)
2. Entering of keywords on Instagram
3. Selection of the first results

<sup>5</sup> The search was conducted using the German words for the specified keywords

An overview of the contacted persons for the promotion of the survey is given in the annex.

Further to publishing the survey on Social Media platforms, various internet forums were chosen to spread the survey at the right audience. The forums were chosen because of their closeness to the supplement industry and because they contain various discussions and threads related to nutritional supplements. The forums were selected based on accessibility through acquaintances or because user-accounts were already existing through the author. The following forums were therefore selected for the publishing of the survey:

Team-andro.de	Kampfkunst-board.info	Swiss-bb.ch	Fitnessforum.ch
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*Table 2: List of chosen platforms to publish the survey*

As a last platform for publishing the survey, offline areas where a high frequency of supplement users was expected were chosen. As a large part of supplements are sold and consumed in supplement stores and fitness centers, the survey was placed in such localities, but on a geographically convenient basis. This means that the survey was placed in person in the following areas:

- PowerFood Supplement Store Winterthur
- ASVZ Fitness-Centre Winterthur
- OldSchoolGym24 Bülach

Customers and athletes visiting the mentioned localities were addressed by directly and in person by the author of this paper. Lastly, the study was conducted taking into consideration the gender of the participant, however, there no difference was made in questions or research design for male and females.

### **3.3 E-Survey**

The aim of this chapter is to provide detailed information about the survey and the rationale behind the questions. In addition, a link to the literature review as well as the research questions is provided. The full questionnaire is available in both applied languages (German and English) in the annex. The translation from German to English was done using either direct German to English word translation, or if there was no such specific translation available, using contextual translations in order to be as precise as possible.

### **3.3.1 Rationale**

The survey was set up online for its convenience for the sharing of the questionnaire, the higher obtainable reach as well as the ability to provide it in different languages. The aim of the questionnaire was to be able to create two groups for comparison for this study, consisting of a research group and a control group. The groups are defined as follows:

#### **Control group – Scenario One**

This group consists of individuals that have already consumed nutritional supplements prior to this study. Focal point of this group is, that the consumption was not actively influenced by Social Media, meaning that they were purchased through other means and through other influential factors other than Social Media.

#### **Research group – Scenario Two**

These consumers consist of individuals having purchased and consumed nutritional supplements under the influence of Social Media. This means that they may have seen posts on the respective platforms that contain nutritional supplements of any kind and in any way, such as through product placement, reviews, recommendations, comments, or direct purchase availabilities.

The survey is set up to cover general questions, questions about the consumption and usage of Social Media, questions related to the consumption of nutritional supplements, as well as a combination of both topics and lastly, control-questions using Likert scales. Additionally, a raffle was implemented as an incentive to participate in this study.

- Filter-Questions
- Personal questions
- Questions related to Social Media
- Questions related to nutritional supplements (Scenario One)
- Mixed-questions: Questions related to nutritional supplements under the consideration of Social Media (Scenario Two)
- Control-questions
- Raffle

#### **3.3.1.1 Filter-Questions**

The filter questions were asked in the beginning of the survey in order to make sure that the right audience was targeted for the questionnaire and to filter out those who were not within the scope of

survey. The first question was to identify whether the participant uses Social Media (Instagram, Facebook, YouTube etc.). The second question was related to Social Media as well and was asked to find out whether certain channels that may post information about nutritional supplements are followed. Lastly, the question of whether nutritional supplements were consumed before was asked. If one of these three requirements were not fulfilled (by answering in a negative way, in this case “no”), then the survey is automatically ended as the participant was not considered part of the target group.

### ***3.3.1.2 Category type questions***

The questions about the participants were asked after the filtering on purpose. This was done in order to save time for the participant in case he was not target group.

The personal questions are considered to be generic and include the following:

- Gender
- Age-group
- Country of residence
- Level of education
- Employment status

These questions were used in order to filter the results of the later questions and to possibly create segments and personas of the participants of this study.

### ***3.3.1.3 Questions related to Social Media***

The questions related to Social Media are asked in order to receive information about the participants usage of Social Media. It was crucial for this study to identify which media was used and how often, in order to be able to see correlations between used media and the consumer behavior towards nutritional supplements. The questionnaire was set up with a mix of continuous type questions and ordinal questions.

This part included questions about the frequency of the used Social Media, the type of channels that were followed and the motivation for following those channels.

This chapter mainly refers to the literature review parts of Social Media and Influencer Marketing. The applied variables and how they were operationalized are visible in table 3 on the following page.

Variable	Operationalization	Applied literature
Frequency of consumption of Instagram, Facebook and YouTube	<ul style="list-style-type: none"> <li>• More than 2x per day</li> <li>• 1-2x per day</li> <li>• more than 1x per week</li> <li>• maximum 1x per week</li> <li>• never</li> </ul>	<ul style="list-style-type: none"> <li>• Social Media (Marketing)</li> <li>• Influencer Marketing</li> </ul>
Types of consumed channels	<ul style="list-style-type: none"> <li>• Private channels (family, friends, etc.)</li> <li>• Public channels (influencers, brands, companies, celebrities, other individuals, fictional characters, motivational channels etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Social Media (Marketing)</li> </ul>
Reasons for usage of Social Media	<ul style="list-style-type: none"> <li>• Because I want to be able to talk about it with friends.</li> <li>• The posts are informative and interesting.</li> <li>• I trust their expertise in their field.</li> <li>• The company/individual represents an example I want to follow.</li> <li>• I identify with these companies/individuals.</li> <li>• The posts from these individuals/companies motivate me do sports.</li> <li>• These companies/individuals entertain me.</li> <li>• They always keep me up to date.</li> </ul>	<ul style="list-style-type: none"> <li>• Social Media (Marketing)</li> <li>• Influencer Marketing</li> </ul>

Table 3: Variables and operationalization of questions regarding to Social Media

### 3.3.1.4 Questions Related to Nutritional Supplements - Scenario One

In this section of the survey, the participants were asked questions about their current or previous consumption of nutritional supplements. This part included questions about the type of nutritional supplement used, how the consumers may have collected information about those products, the importance of certain product attributes for their purchasing decision as well as the place of purchase, frequency of usage, motivation for usage and the monthly expenditures. This part was of the questionnaire was also set up with a mix of continuous type questions and ordinal questions.

These questions served as a baseline for identifying the differences of usage without the use of Social Media and the usage with Social Media.

The applied variables and how they were operationalized are visible in the table 4 on the next page.



Variable	Operationalization	Applied literature
Types of supplements consumed	<ul style="list-style-type: none"> <li>• Proteins (ex. whey-protein, casein-protein, herbal protein etc.)</li> <li>• Carbohydrates (ex. various types of sugar, carbohydrate-shakes etc.)</li> <li>• Fats (ex. omega-3, fish oil, vegetable oils etc.)</li> <li>• Creatine</li> <li>• Vitamins (of any kind)</li> <li>• Minerals and other micro nutrients (ex. zinc, iron, magnesium etc.)</li> <li>• Amino-acids (ex. branched-chain amino acids, essential amino acids etc.)</li> <li>• Performance boosters (ex. caffeine supplements, workout boosters etc.)</li> <li>• Other.</li> </ul>	Customer buying cycle: Awareness phase
Information gathering	<ul style="list-style-type: none"> <li>• Through the internet (blogs, webpages, comparison sites etc.)</li> <li>• Through friends/family</li> <li>• Through a doctor</li> <li>• Through advertisements (social media, magazines etc.)</li> <li>• I did not inform myself.</li> <li>• Other.</li> </ul>	Customer buying cycle: Awareness phase
Product attributes for buying decision	<ul style="list-style-type: none"> <li>• Brand</li> <li>• Quality</li> <li>• Price</li> <li>• Value for money</li> <li>• Longevity</li> <li>• Origins of ingredients</li> <li>• Packaging material (ex. material, bag or container etc.)</li> </ul>	Customer buying cycle: Awareness phase / Purchasing decision
Place of purchase	<ul style="list-style-type: none"> <li>• Online stores</li> <li>• Supermarkets</li> <li>• Sports shops</li> <li>• Specialized shops for nutritional supplements</li> <li>• Pharmacy/Drugstore</li> </ul>	Customer buying cycle: Purchasing decision / After-sales phase
Consumption frequency	<ul style="list-style-type: none"> <li>• Less than 1x per week</li> <li>• 1x per week</li> <li>• 2-6x per week</li> <li>• 1x per day</li> <li>• More than 1x per day</li> </ul>	Customer buying cycle: After-sales phase

Motivational factors for consumption	<ul style="list-style-type: none"> <li>• Because they help me to lose weight.</li> <li>• Because they help me to gain weight/muscle mass.</li> <li>• Because they help with the regeneration after a workout.</li> <li>• Because I can compensate for deficiencies in my nutrition through them.</li> <li>• Because it helps me fight against the symptoms of becoming sick.</li> <li>• I use them as a preventive measure against illnesses.</li> <li>• Other reasons</li> </ul>	Customer buying cycle: Awareness phase  KATALYSE model
Monthly expenditures CHF/EUR	<ul style="list-style-type: none"> <li>• Less than CHF/EUR 50</li> <li>• CHF/EUR 50 – 60</li> <li>• CHF/EUR 61 – 70</li> <li>• CHF/EUR 71 – 80</li> <li>• More than CHF/EUR 80</li> </ul>	Customer buying cycle: Af- ter-sales phase

*Table 4: Variables and operationalization for questions related to nutritional supplements*

The variables for this part of the questionnaires were chosen based on the logic of the customer buying cycle as described in chapter 2.3. It follows the various and in this case, basic steps that a consumer undertakes from the awareness of necessity of a product until the actual consumption. In this case the following variables were chosen:

**Awareness phase:** Information gathering, motivational factors (based on the Katalyse model), types of supplements (estimated to be based on motivational factors), product attributes crucial for buying decision

**Purchasing phase:** Product attributes crucial for buying decision, Place of purchase

**After sales phase:** Frequency of actual consumption, Expenditures (based on assumption, the currency chosen because of the surrounding countries of the country of origin of the snowball sampling).

#### **3.3.1.5 Mixed questions – Scenario Two**

The mixed section contained similar questions as described in chapter 3.3.1.4, however, the aspect of Social Media was included. This part was created with the purpose of identifying how the usage of Social Media may have influenced the aspects of consumption of nutritional supplements as described in the previous chapter and if certain correlations could be discovered. Again, the questionnaire was set up with a combination of continuous type questions and ordinal questions, as well as an additional not-mandatory qualitative open-question.

The mixed questions section was set up in three parts:

- Filter question in order to identify whether the participant ever actively purchased nutritional supplements under the influence of Social Media (categorization of participants into Scenario One and Two).
  - If the answer was “Yes”, an additional question about the motivation for the purchase of the products were asked.
  - If the answer was “No”, an additional question about the motivation for not purchasing the products were asked.
  - The participants that answered the previous filter question with “yes” were automatically forwarded to this section, where the same questions as in chapter 3.3.1.4 were asked but under the consideration of Social Media.
  - The participants with a negative answer to the filter questions were automatically forwarded to the control-questions that are described in chapter 3.3.1.6.

The same variables and operationalization approach as in scenario one was applied in this case, with the exception of “information gathering” and “product attributes” as they are considered obsolete in the second scenario.

#### **3.3.1.6 Control-Questions**

The last part of the survey contains questions from the sections described above, but in a different wording. These questions were asked in order to identify whether the participants would answer the same questions in the same way, if they were asked differently. The questions were asked using the variables and operationalization as portrayed in table 5 on the next page and are based on the same logic of literature review as described in previous chapters.

Variables	Operationalization
I have been influenced to buy nutritional supplements by people I follow on Social Media.	Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree
I consume more nutritional supplements consumption because of Social Media	See first variable / operationalization
Social Media has changed my perception about nutritional supplements in a positive way.	See first variable / operationalization
Social Media has changed my perception about nutritional supplements in a negative way.	See first variable / operationalization
Nutritional supplements can have a positive impact on my health.	See first variable / operationalization
Nutritional supplements can help with losing weight.	See first variable / operationalization
Nutritional supplements can help with gaining weight/muscle mass.	See first variable / operationalization
Nutritional supplements can help with the regeneration after a workout.	See first variable / operationalization
Nutritional supplements help me to fight the symptoms when I am sick (ex. have a cold).	See first variable / operationalization
Nutritional supplements can help prevent certain illnesses.	See first variable / operationalization
Nutritional supplements can help me compensate for certain deficiencies in my nutrition.	See first variable / operationalization
I use nutritional supplements to help me lose weight.	See first variable / operationalization
I use nutritional supplements when I want to gain weight / muscle mass.	See first variable / operationalization
I use nutritional supplements when I want to help regeneration after a workout.	See first variable / operationalization
I use nutritional supplements when I am sick and want to fight the symptoms (i.e. have a cold).	See first variable / operationalization
I use nutritional supplements when I want to prevent a certain illness.	See first variable / operationalization
I use nutritional supplements to compensate for certain deficiencies in my nutrition.	See first variable / operationalization

Table 5: Variables and operationalization for control-questions.

### 3.3.1.7 Raffle

At the end of the survey, the participant was given the optional opportunity to participate at a raffle, where three gift cards for supplement stores of the amount of EUR/CHF 30.00 could be won. The participant would be able to take part in the raffle by mentioning their Social Media account names or email addresses. The gift card was not bound to a certain supplement store but the winners were given the opportunity to decide for which shop the gift card should be issued to.

This section was implemented in order to provide an incentive for the participants to take part in this study and the prizes of gift cards for supplement stores was chosen on purpose because it was part of the target group's field of interest. Participants that did not complete the survey or were not target group were given the opportunity to participate in the survey.

A total of 147 individuals took part in the raffle. The three winners were chosen at the end of the survey and selected with the help of the excel randomization function (see annex).

### 3.4 Analysis method

The data was analyzed using various levels of measurement and depending on the type of questions asked. The analysis included various presentation approaches depending on the type of data that was to be visualized.

The following steps were taken for the analysis of the data:

1. Coding of data
2. Testing of normal distribution / representativeness / significance
3. Category type questions
  - a. Frequency of responses using percentages on category questions
    - i. Usage of bar charts and pie charts to visualize the categories
4. Continuous type questions
  - a. Measure of central tendency
  - b. Mean, median, mode of the respective answers
  - c. Dispersion of distribution
    - i. Range of smallest and largest responses
    - ii. Standard deviation

For bivariate analysis, the following steps were taken:

1. Combination of category questions and continuous questions
  - a. Comparison of means
    - i. t-tests if applicable / Mann-Whitney-U tests if applicable

Further to the presentation of the data, specific analysis for the answering of the research questions/hypotheses are done. The analysis of the survey for the hypotheses testing were the following:

**Hypothesis 1:** This hypothesis was answered with the comparison of the two groups using statistical significance test for nominal data. In this case, a Chi-Square analysis was conducted.

**Hypothesis 2:** This hypothesis was answered with the comparison of the two groups using statistical significance test for nominal data. In this case, a Chi-Square analysis was conducted.

**Hypothesis 3:** This hypothesis was answered using statistical significance tests between the groups of scenario one and scenario two such as t-tests or Mann-Whitney-U tests where applicable (depending on distribution of data). In addition, linear regression analysis' were applied to identify the correlation between various variables.

**Hypothesis 4:** This hypothesis was answered with the comparison of the two groups using statistical significance test for nominal data. In this case, a Chi-Square analysis was conducted.

**Hypothesis 5:** This hypothesis was answered using statistical significance tests between the groups of scenario one and scenario two such as t-tests or Mann-Whitney-U tests where applicable (depending on distribution of data). In addition, linear regression analysis' were applied to identify the correlation between various variables.

Lastly, instrument reliability testing was conducted using Cronbach-Alpha analysis to determine the reliability of the chosen instruments within the survey.

## 4 Analysis

In this chapter, the collected data from the survey described in chapter 3 is presented and statistically evaluated. The research questions and hypothesis are then answered with the use of various statistical means where applicable.

### 4.1 Findings

During the time the survey was activated, it reached a return rate of 353 total participants. Out of the total of 353 participants, 265 completed the entire survey while being the target group (identified through answering the first four filter-questions), which results in a target group-completion rate of 75.07%.

For clarification reasons, it is further stated that in the upcoming analysis, the distinction between female and male was analyzed, however, in none of the cases a statistical significance could be identified, which is why they are not included in the analysis. The same counts for the other categories such as educational level, employment status and country of origins.

#### 4.1.1 Sampling analysis

As described in the methodology, the link to the questionnaire was distributed through various means including Social Media, mailings, direct with multiple people or personal approach. Because of the nature of the snowball sampling methodology applied in this study, it is however not possible to determine a specific pattern in the distribution of the data. In addition, the determination of the sampling error as well as making statistical inferences from the sample to a population cannot be applied in this case due to the missing absence of random selection of a sample. However, basic analysis of the responses size such as normal distribution or representativeness of the data was made. For the variable “birth year”, no normal distribution nor representativeness of the data was given if included all the participants. Table 6 provides an overview of the data calculated for the sample size:

	Mean	SD	Minimum	Maximum	Chi-Square
<b>Birth year</b>	1990.090	0.442	1953	2002	0.000

*Table 6: Distribution of data with variable "birth year"*

As visible in the table, the data could not be considered to be representative, however, this might be mainly because of the low number of participants and could be increased with additional responses. However, when narrowing the participants down to focus on the Generation Y only, the data becomes normally distributed and representative:

Distribution by Birth Year - Generation Y

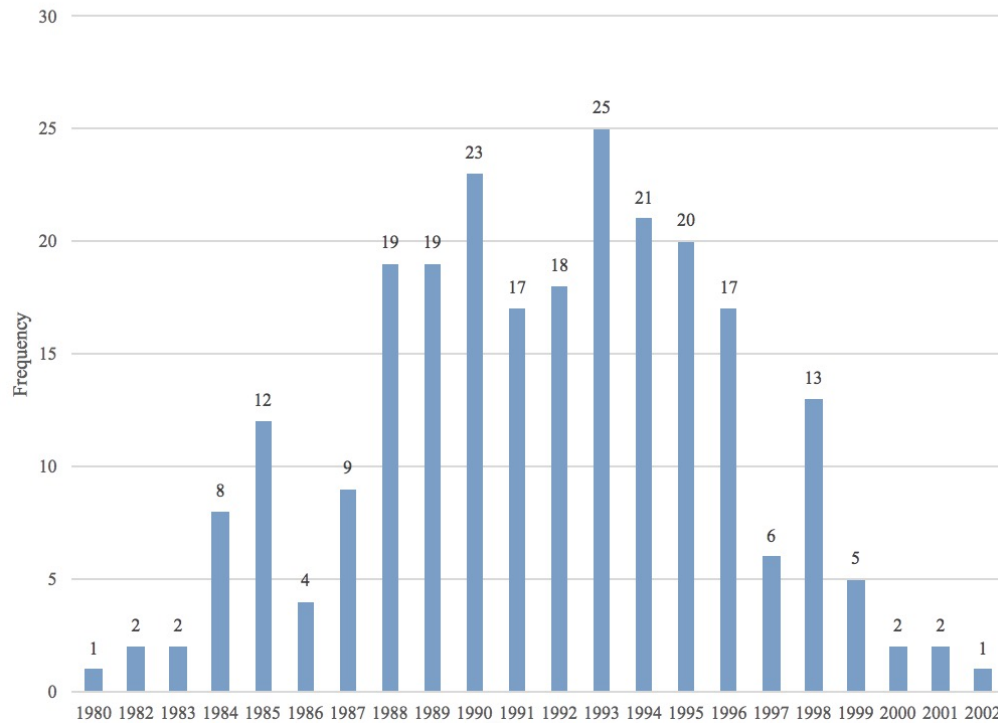


Figure 12: Distribution of variable "birth year" focused on Generation Y.

	Mean	SD	Minimum	Maximum	Chi-Square (p-value)
Birth year	1991.670	0.268	1980	2002	0.108

Table 7: Distribution of variable "birth year" focusing on Generation Y

#### 4.1.2 Category type questions

##### 4.1.2.1 Filtering questions

Because of the nature of the snowball sampling as a method that does not allow direct influence in selecting participants with the right characteristics, filter questions had to be applied at the beginning of the survey. The first four questions were therefore placed in order to filter reach the right target group for this survey. The questions and results thereafter were the following:

Question 1: "Do you use Social Media such as Facebook Instagram and/or YouTube etc.?"		
Answer:	No, of participants	Share of total participants
Yes	347	98.3%
No	6	1.7%

Table 8: Filter Question 1



**Question 2: “Do you follow any individual/company related to one of the following activities?”**  
 -Sports (of any kind: fitness, bodybuilding, CrossFit, running, cycling, extreme sports etc.)  
 -Nutrition and nutritional tips  
 -Nutritional supplements  
 -Healthy lifestyle

Answer:	No, of participants	Share of total participants
<b>Yes</b>	314	88.95%
<b>No</b>	31	8.78%

Table 9: Filter Question 2

**Question 3: “Do you consume nutritional supplements of any kind or have you consumed them in the past?”**

Note: Nutritional supplements (ex. vitamins, protein powder etc.) are products that can help a normal diet in a simplified way and most often come as pills, capsules, powders etc.

Answer:	No, of participants	Share of total participants
<b>Yes</b>	296	83.85
<b>No</b>	19	5.38%

Table 10: Filter Question 3

**Question 4: “Do the persons/companies you follow recommend or provide information about nutritional supplements?”**

Answer:	No, of participants	Share of total participants
<b>Yes</b>	269	76.20%
<b>No</b>	24	6.80%

Table 11: Filter Question 4

Lastly, the net target group consisted of 170 males and 93 female individuals as well as two unspecified gender with the category “other”. This results in a target group of total 265 people which amounts for 75.07% of the total participants of the survey.

#### 4.1.2.2 *Country of origins*

Because the survey was published and mainly targeted at German speaking participants (for convenience reasons), the majority of the participants' countries of origins are from Germanic countries. However, because of the snowball sampling, individuals from other countries took part in the survey. Table 12 provides an overview of the participants' countries of origin. It was decided on purpose to use a table instead of a graph for straightforwardness, as a graph would have not provided the same information in a clear way:

Country	Number of participants	%
Switzerland	79	22.38
Germany	149	42.21
Austria	18	5.10
Luxemburg	2	0.57
Egypt	1	0.28
France	1	0.28
Italy	2	0.57
Romania	4	1.13
Hungary	1	0.28
Liechtenstein	1	0.28
Jersey	1	0.28
Spain	2	0.57
USA	2	0.57
UK	2	0.57

*Table 12: Overview of the countries of origins of the participants*

Summarizing, it can be said that the target group in terms of countries of origins was successfully reached.

#### 4.1.2.3 *Education level*

Out of the 265 participants 52.69% (186 individuals) stated to have at least obtained a higher education (gymnasium and higher). This might be a consequence of the snowball sampling as well as the target group being mainly the Generation Y. In general, it can be said that there are two main categories namely people who have obtained a degree at the gymnasium level (90 individuals) as well as a Bachelor's degree (56 individuals) Figure 13 provides the complete overview of the variable "Educational level":

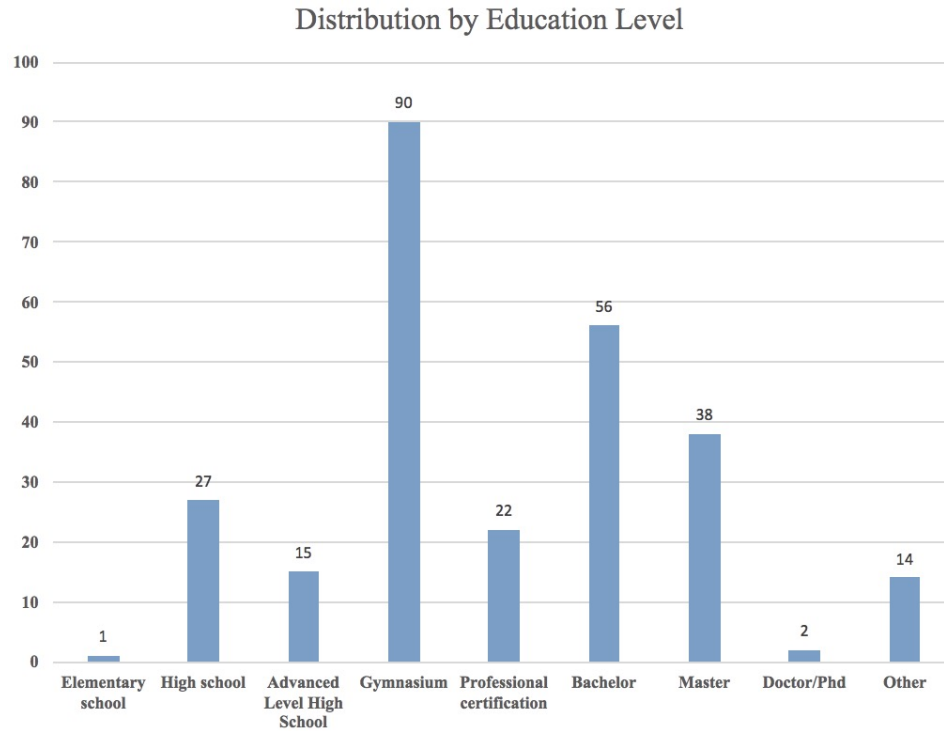


Figure 13: Distribution by education level

#### 4.1.2.4 Employment status

The employment status of the participants consists mainly of two categories. With 124 participants claiming to have been working at the time of filling out the survey, this category creates the largest group within the participants. The second largest category has 92 participants and consists of people who were currently studying full-time at a university. Figure 14 provides a full overview of the employment status of the participants.

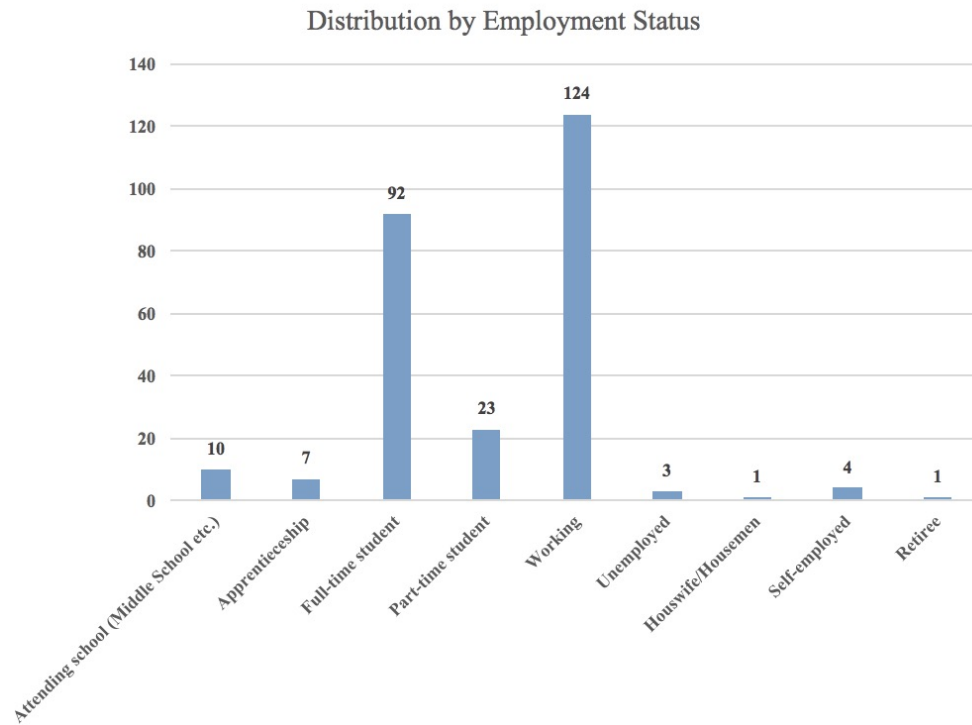


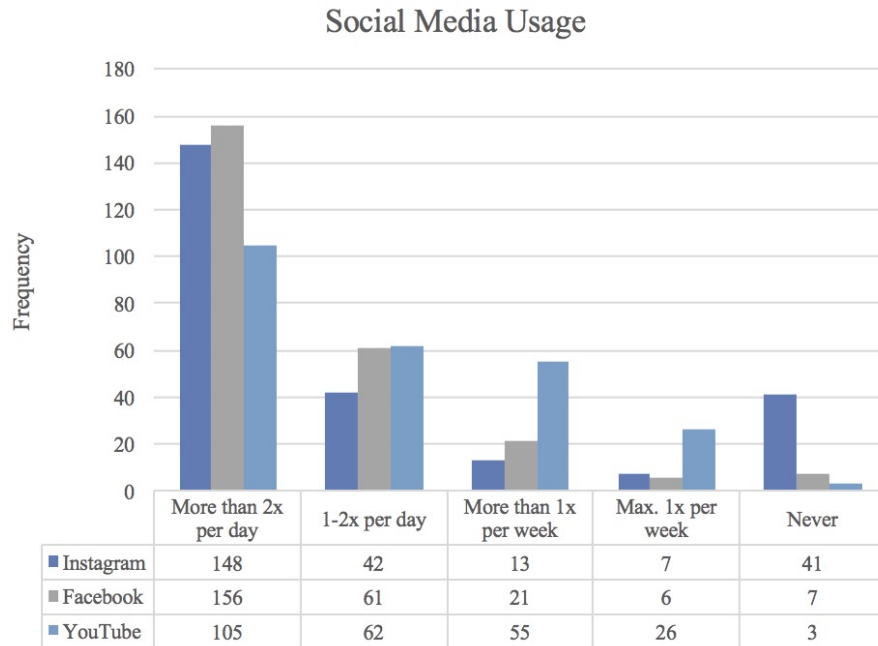
Figure 14: Distribution by employment status

### 4.1.3 Social Media

In this sub-chapter, the analysis to the questions related to the usage of Social Media is made.

#### 4.1.3.1 Usage

Overall, the Social Media platform that is used the most by the consumers is Facebook. With 156 out of 251 answers stating to use it more than twice a day, this platform is used more than Instagram with 148 results and YouTube with 105. Overall, a high frequency of usage of all the three Social Media platforms subject to this thesis could be observed. A detailed overview about the frequency of Social Media usage is provided by figure 15.



*Figure 15: Frequency of usage of Instagram, Facebook and YouTube*

These results will further be analyzed in a following chapter in order to identify a correlation between the frequency of Social Media usage on the consumption of nutritional supplements and other variables.

#### **4.1.3.2 Motivation**

As for the motivation for following and consuming content related to sports, fitness, nutrition and other similar content (as described in chapter Methodology), the majority of the participants stated to enjoy the content because they are informative and interesting (224 results). Surprisingly, this has reached more results than “entertainment”, with only 195 results. The third most stated motivational factor was that those individuals who consume this kind of content feel motivated by the impersonators to involve themselves in physical activities (140 results). Figure 16 shows the complete assignment of motivation of the participants.

## Motivation for Following Fitness/Nutrition Related Channels

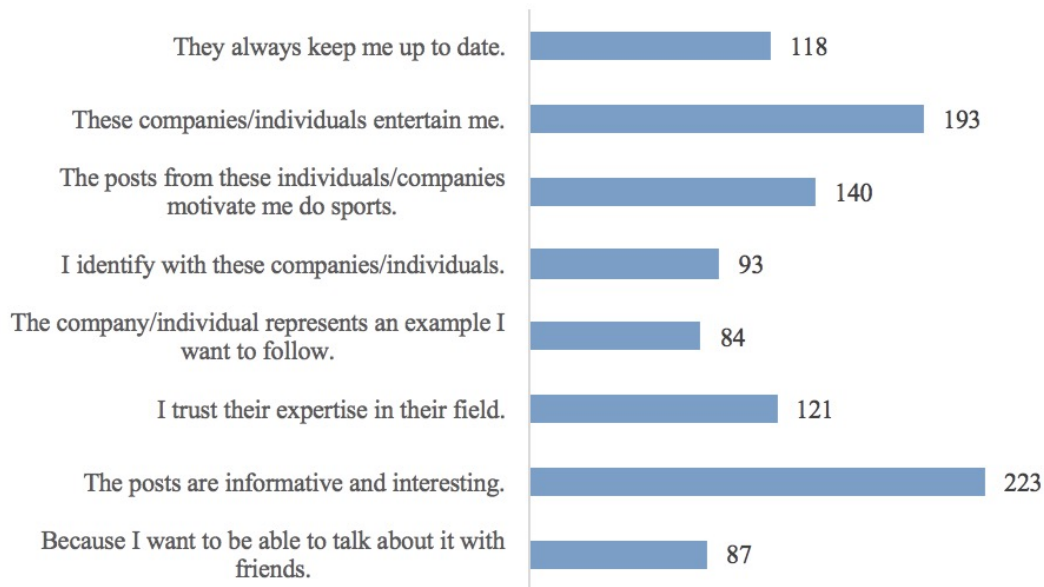


Figure 16: Motivational factors for consuming sports and nutritional driven content on Social Media

### 4.1.4 Nutritional Supplements

In this sub-chapter, the answers to the questions regarding the consumer behavior of nutritional supplements are described separately.

#### 4.1.4.1 Types of Nutritional Supplement - Scenario One

As described before, this question was asked in two variations in order to identify differences in consumption. For the first scenario, the nutrients supplemented the most by consumers are proteins (216 mentions), followed by vitamins and micro nutrients with both 173 mentions. In general, it can be said that there is a rather balanced consumption of all the different kinds of supplements. As visible in figure 17, with the exception of carbohydrates, all the supplements were mentioned rather similarly.

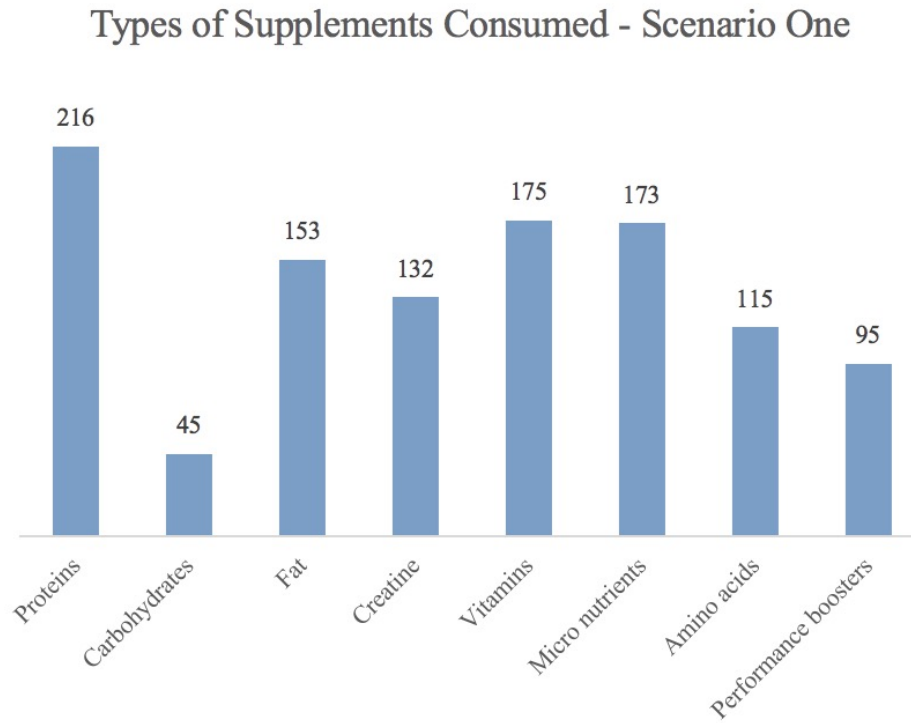


Figure 17: Types of supplements consumed within scenario one

#### 4.1.4.2 Types of Nutritional Supplements – Scenario Two

As for the second scenario as described in the methodology, the most prominent nutritional supplement that are purchased by the consumers through Social Media are proteins (n=103), followed by fat acids (n=64) and vitamins and performance boosters. The complete overview is available in figure 18 on the next page.

## Types of Supplements Consumed - Scenario Two

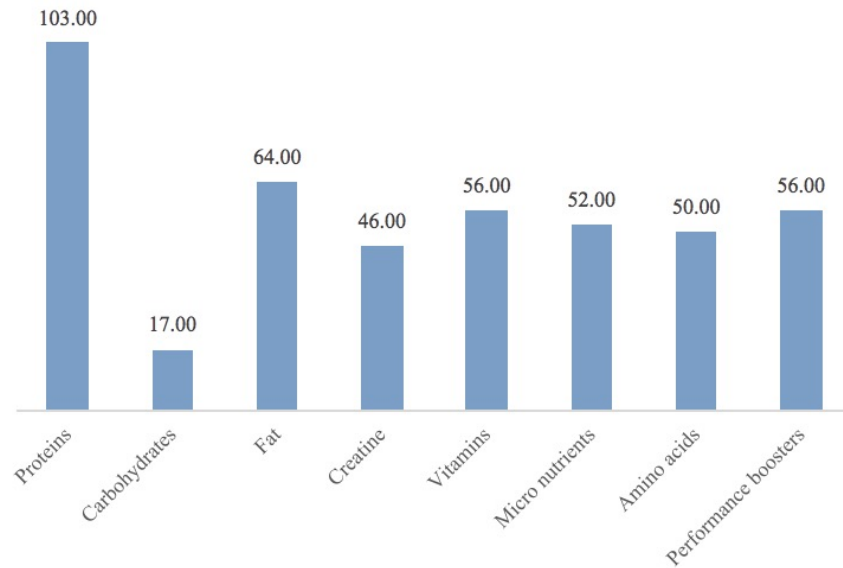


Figure 18: Types of supplements consumed within scenario two

In an additional test, it was analyzed whether there was a significant difference in the types of supplements consumed using chi-square tests. Table 13 provides the results of the Chi-Square test:

Statistic	Value	DF	p-value	Critical value	$\alpha$
Chi-Square	13.913	7	0.053	14.067	0.05

Table 13: Chi-Square test for types of supplements consumed

The critical value for chi-square tests with a degree of freedom (DF) of 7 as in the underlying case and at an alpha of 0.05 is 14.067. Since the actual calculated chi-square value is below the respective value and  $p > 0.05$ , it can be said that there is no significant difference between the groups.

### 4.1.4.3 Information Gathering

As part of identifying the consumer behavior towards nutritional supplements, it can be said that today, the majority of information and product comparisons of nutritional supplements are made through the internet. 215 participants have stated that they inform themselves through internet using comparison platforms, manufacturer homepages or other content in order to increase their knowledge about the products, which makes it the main source of information gathering for nutritional supple-



ments. As additional sources for information, friends/acquaintances and family were stated (83 results), followed by advertisements (53 results, doctors (33 results) and a minority of 8 people who stated that they did not inform themselves at any point when purchasing nutritional supplements.

#### **4.1.4.4 Product Attributes**

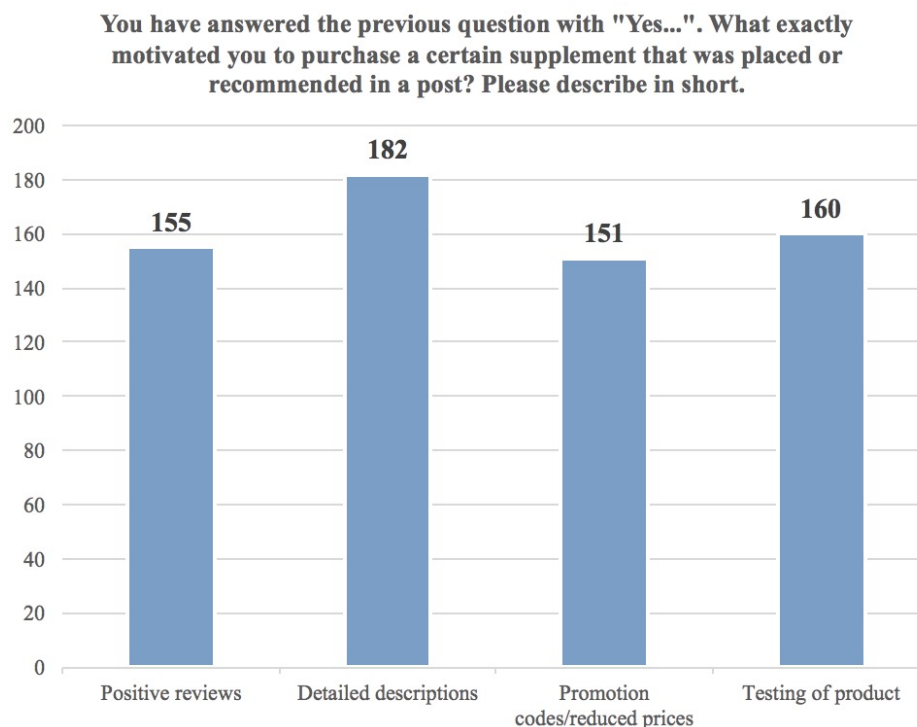
When it comes to the question of which product attributes are most important for consumers of nutritional supplements for their buying decision, the survey shows that the product quality is perceived as the most impactful attribute (152 results out of 249). The survey resulted in the following ranking for the product attributes influencing buying decision (rank one having highest priority, rank seven the lowest):

<b>Ranks</b>	<b>Highest frequency</b>	<b>Product attribute</b>
Rank 1	152	Quality
Rank 2	61	Value for money
Rank 3	90	Price
Rank 4	58	Brand
Rank 5	79	Longevity
Rank 6	69	Origins
Rank 7	150	Packaging

*Table 14: Ranking of product attributes for buying decisions*

#### **4.1.4.5 Catalysts for Purchase Influenced by Social Media**

This non-mandatory multiple question was implemented with the aim to identify the individuals who purchased nutritional supplements under the influence of Social Media and achieved a total number of participants of 158. The responses to this question with similar amounts of responses for each possible selection. The main catalyst for purchasing a nutritional supplement upon seeing it in a published content on Social Media is the degree of description of the products. 182 participants stated that the detailed descriptions convinced them to purchase nutritional supplements (of which the type is herewith not specified). Other reasons stated were product testing (n=160), positive reviews on Social Media (n=155) and lastly, promotional codes or cost reductions through that apply if products are purchased through Social Media (n=151).



*Figure 19: Catalysts for the purchase of nutritional supplements because of Social Media.*

As for the people who did not purchase any supplements through Social Media, the number of participants was 89 (non-mandatory question). The majority of the participants in this question stated that what prevented the purchase of products visible in Social Media content was the lack of interest of the consumers ( $n=48$ ). Additional qualitative information was provided by the participants, of which the majority stated that the lack of trust in nutritional supplement companies and the supplement itself would create an aversion towards purchasing those products. Other reasons were stated such as pure financial interest by the companies or the influencers creating the specific content. Additional information is visualized in figure 20:

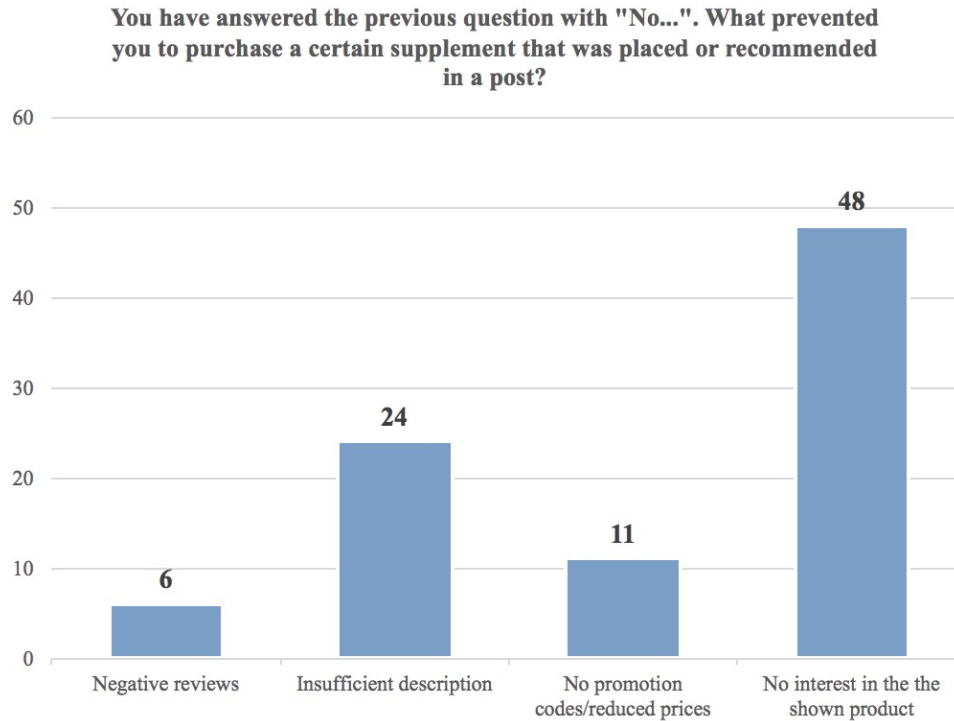


Figure 20: Catalysts preventing the purchase of nutritional supplements displayed on Social Media.

#### 4.1.4.6 Place of Purchase – Scenario One

The survey shows comparatively one-sided results when it comes to the preferred place of purchase. With 174 results, the majority of the consumers purchase nutritional supplements through online stores, which amounts for 65% of the total answers. As secondary preference for place of purchase, stores specialized to the sales of nutritional supplements were mentioned (48 mentions). The complete overview is provided on the next page with figure 21.

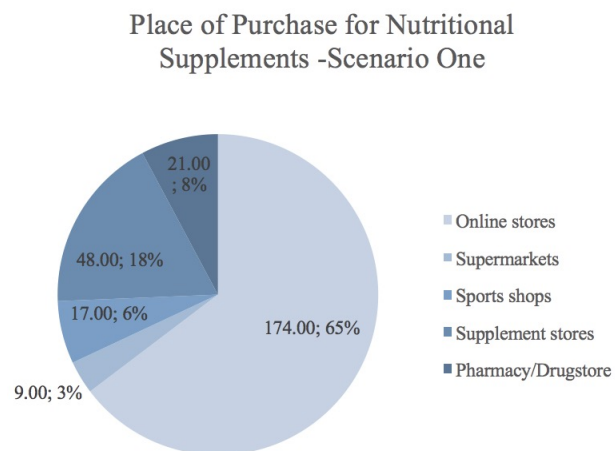


Figure 21: Places of Purchase for Nutritional Supplements – Scenario One

#### 4.1.4.7 Place of Purchase – Scenario Two

As for the second scenario, nutritional supplements that were purchased under the influence of Social Media (n=158), the most preferred sales channel for the consumers appeared to be online stores, with a total of 140 results, which makes up for 89% of the results for this question. The analysis shows that the tendency for purchasing nutritional supplements influenced by Social Media is through online stores and offline stores are less frequented in that case. While in scenario one, the second most frequented place of purchase were supplement stores, in the second scenario it was the pharmacies/drug-stores. In proportion, however, the online stores have increased as place of purchase when compared to scenario one.

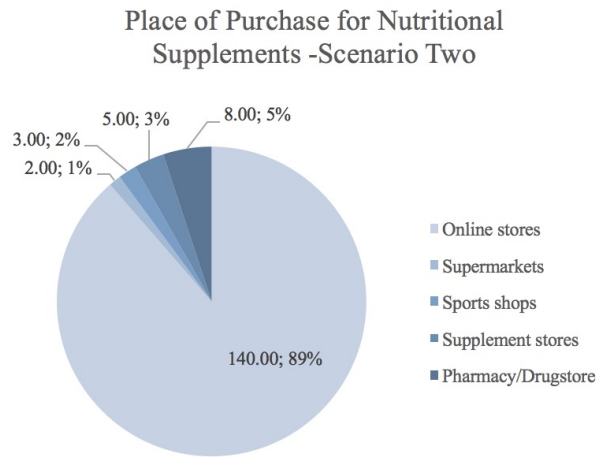


Figure 22: Places of Purchase for Nutritional Supplements - Scenario Two

The relative comparison of the two scenarios shows that consumers who purchase nutritional supplements through or because of Social Media, tend to acquire those products mostly through online stores. In order to analyze whether these change is significant, the two scenarios were compared using a Chi-Square analysis. The analysis has provided the following results:

Statistic	Value	DF	p-value	Critical value	$\alpha$
Chi-Square	31.955	5	<0.001	11.070	0.05

Table 15: Chi-Square test for the place of purchase of nutritional supplements

Given the fact that the Chi-Square value of 31.955 is higher than the Chi-Square critical value at degrees of freedom of 5 and alpha of 0.05, as well as  $p < 0.05$ , it can be said that there is a significant difference between the two analyzed groups.

#### 4.1.4.8 Consumption Frequency – Scenario One

The consumption frequency of the supplements acquired without having actively purchased through or because of Social Media ( $n = 252$ ) show an average consumption of 3.853, which implies in a minimum average consumption of 2-6 times. The mode of the consumption in scenario one, however, is the consumption of 1x per day (coded with 4,  $n = 85$ ). The following table provides additional information about the consumption frequency:

	Mean	Mode	Median	SD	Skewness	Kurtosis
<b>Consumption Frequency – Scenario One</b>	3.853	4	4	0.068	-0.771	-0.035

Table 16: Consumption Frequency - Scenario One

The results of the data analysis of the survey show a negative skewness of -0.771, which means that the majority of the answers obtained were larger than the average score. In this case, it means that the majority of the participants stated to use nutritional supplements at least more than 2-6 times per week. There is a low negative excess (kurtosis) of -0.035 which indicates that the distribution has lighter tails and a flatter peak than the normal distribution. This is also an indicator that the data is not normally distributed but rather uniform distributed, which is also visible in figure 23.

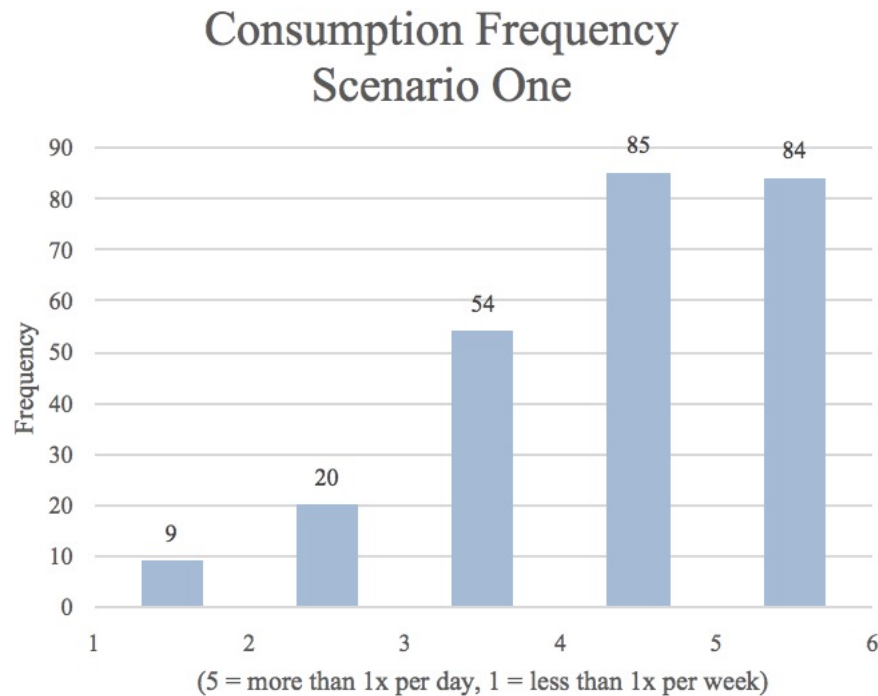


Figure 23: Consumption Frequency - Scenario One

As visible in figure 21 as well as through the provided data, no normal distribution was identified within this dataset, which is why for further testing of significance of the mean, nonparametric testing was applied using the Mann-Whitney-U-Test.

#### **4.1.4.9 Consumption Frequency – Scenario Two**

The second scenario for the frequency of consumption included consumers who actively purchased nutritional supplements because or through Social Media. The total amount of people who fell under this category was 156. The average of consumption of the supplements within this scenario is 3.923, which results in a minimum consumption of 2-6 times a week. No change in mode was identified within this scenario if compared to scenario one, which means that the most frequent consumption was identified to be 1x per day ( $n = 63$ ). The table below provides additional information about the consumption frequency of scenario two:

	Mean	Mode	Median	SD	Skewness	Kurtosis
<b>Consumption Frequency – Scenario Two</b>	3.923	4	4	0.081	-0.938	-0.611

*Table 17: Consumption Frequency – Scenario Two*

Compared to the first scenario, the second scenario shows a lower skewness of -0.938, which means that the higher frequency of consumption is more advanced and one-sided compared to the one in scenario one. In addition, the analysis shows a lower negative excess of -0.611, which would result in a flat peak and lighter tail, similar to scenario one but in a higher degree:

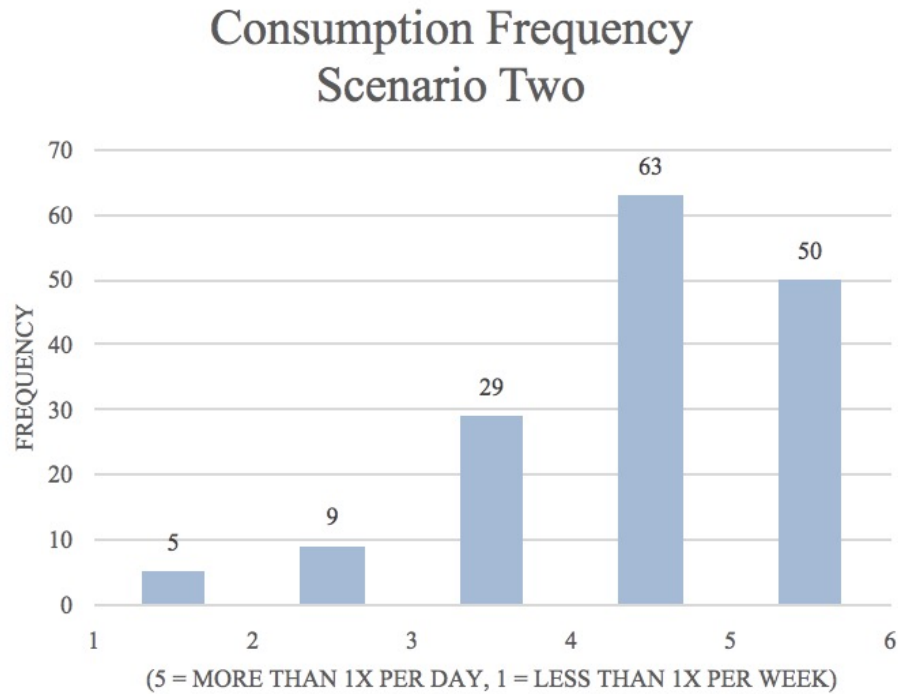


Figure 24: Consumption Frequency - Scenario Two

The results show that there was a minor difference in the average consumption frequency between nutritional supplements bought without the influence of Social Media (scenario one) and those who were actively purchased through or because of Social Media (scenario two). The difference in mean was calculated to be higher by 0.07 for the second scenario. As again, no normal distribution was identified for this scenario, the nonparametric test of Mann-Whitney-U-Test was applied in order to calculate the significance of the mean between the two samples. In this case, a one-tailed test with the condition  $S1 < S2$  was applied, as the aim of the test was to identify if the increase was significant. The analysis has provided the following results:

Mann-Whitney-U-Test	N - S1	Median – S1	N – S2	Median- S2	U-Value	z-value
Consumption Frequency	252	200.5	156	200.5	20224	0.491

Table 18: Mann-Whitney-U-Test for Consumption Frequency

Because a sample size larger than 30 was applied for the test, a z-distribution is applied for this Mann-Whitney-U-Test (Universtität Zürich, 2015). For this purpose, the z-value was calculated using the following formula:

$$z = \frac{U - \mu_U}{\sigma_U}$$

For the underlying case, the following calculation was applied:

$$z = \frac{20224 - \frac{252 \cdot 156}{2}}{\sqrt{\frac{252 \cdot 156(252 + 156 + 1)}{12}}} = 0.491$$

Considering the critical value at an  $\alpha$  of 0.05 is  $|1.96|$ , the condition of  $z < 1.96$  applies to this situation, which means that there is no significant increase in consumption frequency for nutritional supplements purchased under the influence of Social Media. Additional details about the hypotheses testing is provided in chapter five.

#### ***4.1.4.10 Motivational Factors for Supplementation – Scenario One***

To identify the motivational factors for nutritional supplementation, the supplementation model by Katalyse (2010) was applied, that divides the motivational factors into various areas. These areas were included as part of the questionnaire in both scenarios and the survey shows that, for scenario one, the major contributor to the motivation for supplementation are nutritional deficiencies. That means that the consumers may have deficiencies in their nutrition, hence they supplement to counteract those deficiencies ( $n=155$ ). The second most mentioned motivational factor are driven by lifestyle ideals, namely the weight gain in terms of muscle mass ( $n=143$ ), followed by supplementation as Salutogenic prevention herewith described as “illness prevention” ( $n=133$ ). The complete overview is available in figure 25.



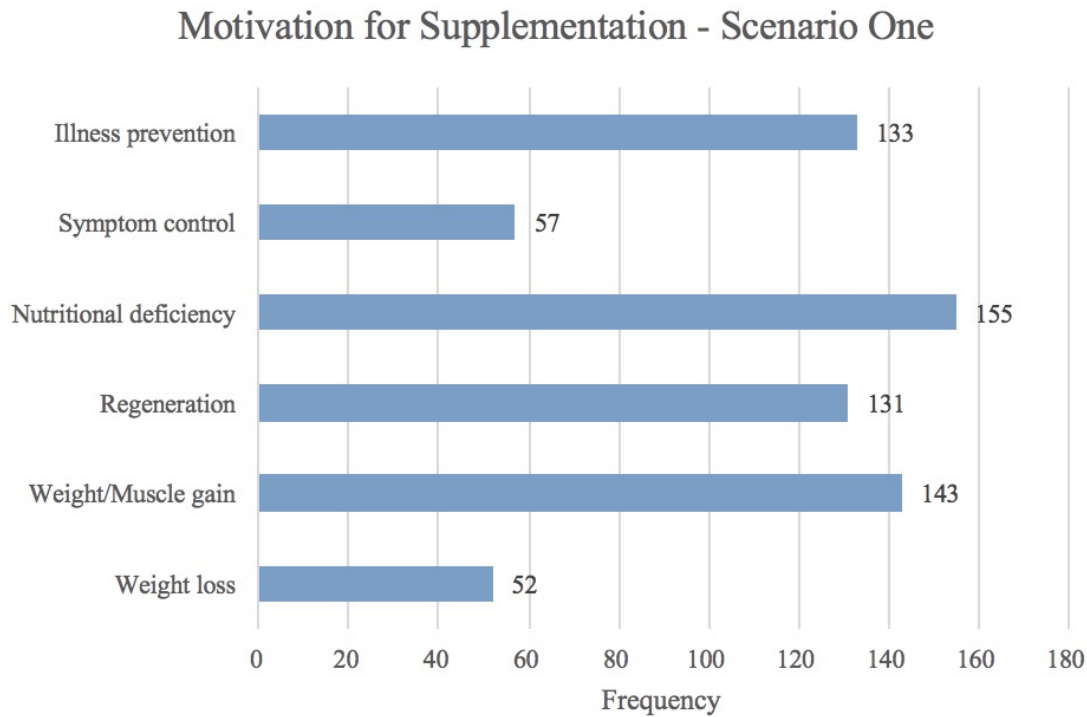
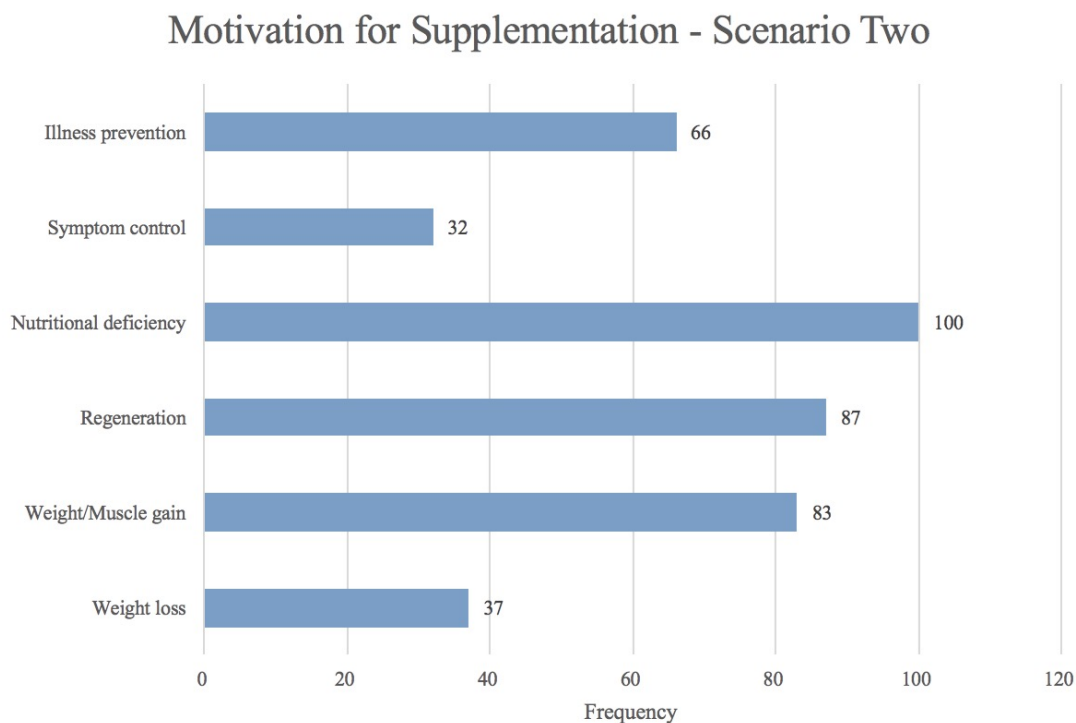


Figure 25: Motivational Factors for Supplementation - Scenario One

#### 4.1.4.11 Motivational Factors for Supplementation – Scenario Two

For the second scenario (148 participants) regarding the motivational factors for supplementation, a similar situation was identified compared to scenario one. The most frequent reason for supplementation for nutritional supplements within this scenario appears to be the same as for scenario one, namely the nutritional deficiencies ( $n=100$ ). However, the second motivational factor appears to be the regeneration after physical activities ( $n=87$ ) rather than simple weight/muscle gain ( $n=83$ ), who has the third highest frequency. The next figure provides the overview to the results for the motivational factors in scenario two.



*Figure 26: Motivational Factors for Supplementation - Scenario Two*

With the use of a Chi-Square test it was determined whether the identified differences between the two scenarios were significant. The test conducted with an alpha level of 0.05 provided the following results:

Statistic	Value	DF	p-value	Critical value	$\alpha$
Chi-Square	3.219	5	0.666	11.070	0.05

*Table 19: Chi-Square test for the motivation for supplementation within the two scenarios*

The test showed that there is no significant difference between the motivational drivers for supplementation between normally consumed nutritional supplements and supplements purchased under the influence of Social Media (Chi-Square value < critical value,  $p > 0.05$ ).

#### 4.1.4.12 Monthly Expenditures – Scenario One

For this analysis, the different expenditures categories were coded in order to be able to statistically analyze the results. The following coding was undertaken for this question:

Expenditures	Coded
Less than CHF/EUR 50	1
CHF/EUR 50-60	2
CHF/EUR 60-70	3
CHF/EUR 70-80	4
More than CHF/EUR 80	5

Table 20: Coding for the analysis of the monthly expenditures for scenario one

As for the monthly expenditures for nutritional supplements bought without any influence of Social Media, the survey has shown rather one-sided results. The participants' (n=252) average consumption is 1.786, which results in a minimum consumption of less than CHF/EUR 50.00 per month.

	Mean	Mode	Median	SD	Skewness	Kurtosis
Monthly expenditures Scenario one (S1)	1.786	1	1	0.073	1.498	1.312

Table 21: Monthly Expenditures - Scenario One

Furthermore, a right-skewed distribution was identified with and a value of 1.498 has been calculated, which explains the one-sided results for the expenditures. Overall, this means that the majority of the consumers spend less than CHF/EUR 50.00 per month for nutritional supplements. Lastly, the analysis shows a positive excess of 1.312 (leptokurtic kurtosis), which means that the distribution has heavier tails and sharper peak compared to a normal distribution.

As indicated by the skewness of the distribution, the results were not normally distributed and not representative (Chi-Square  $p=0.000$ ), which is why nonparametric tests such as Mann-Whitney-U-tests were applied on a later stage.

#### 4.1.4.13 Monthly Expenditures – Scenario Two

As for the second scenario, the same coding as for the first scenario was applied.

In the second scenario, a total of 155 consumers were questioned and the results were once again rather one-sided. The majority of the consumers stated to spend less than CHF/EUR 50.00 per month for nutritional supplements (n=78), however, the average consumption turned out to be 2.013, resulting in an average consumption of nutritional supplements of CHF/EUR 50-60, which is higher than for the scenario one.

	Mean	Mode	Median	SD	Skewness	Kurtosis
<b>Monthly expenditures Scenario two (S2)</b>	2.013	1	1	0.101	1.031	-0.102

Table 22: Monthly Expenditures - Scenario Two

While again, a positive skewness (1.031) could be observed, the analysis showed a negative kurtosis of -0.102 for this scenario, meaning that the peak of answers was lower, which would explain the higher mean in this scenario.

As a difference in expenditures between scenario one and two could be observed ( $x\text{-mean } S1 < x\text{-mean } S2$ ), additional tests were done in order to analyze the significance of the difference. Because for this sample, no normal distribution could be identified either, the difference in means was analyzed using the Mann-Whitney-U-Test. In this case, a one-tailed test was conducted in order to identify if the difference in mean from scenario two compared to scenario one was significant. The analysis with the condition of  $x\text{-mean } S1 < x\text{-mean } S2$  provided the following results:

<b>Mann-Whitney-U-Test</b>	<b>N - S1</b>	<b>Median - S1</b>	<b>N - S2</b>	<b>Median-S2</b>	<b>U-Value</b>	<b>z-value</b>
<b>Monthly expenditures</b>	252	112.5	152	112.5	21449.5	1.667

Table 23: Mann-Whitney-U-Test for Monthly Expenditures

Since the sample size was larger than 30 as described in theory (Universität Zürich, 2015), the Mann-Whitney-U-Test follows a z-distribution ( $n1+n2>30$ ). As visible in table 15, to identify the significance of the difference between the two data sets, the z-value was calculated by applying the same method as for the frequency of consumption:

$$z = \frac{21449.5 - \frac{252 \cdot 152}{2}}{\sqrt{\frac{252 \cdot 152(252 + 152 + 1)}{12}}} = 1.667$$

Because the z-value is lower than the significance level at alpha of 0.05 ( $z\text{-value} < \text{critical value of } \pm 1.96$ ), the  $H_0$  hypothesis can be retained, which means that there is no significant increase in the expenditures for nutritional supplements, if they are purchased because or through Social Media.

Lastly, the statement remains the same if the population is narrowed down to the Generation Y or if stratified by gender, which is why hereafter it is renounced to show the complete calculations and details for those groups as well.

The hypotheses testing will be further shown in the upcoming chapter five.

#### 4.1.4.14 Variable Correlations

In this chapter, the variable correlations on the variables “Consumption Frequency” as well as “Expenditures” are going to be analyzed with various independent variables such as gender, birth year, educational level and employment status as well as the frequency of Social Media usage. The significance level for the correlation analysis was set at a confidence-level of  $\alpha=0.05$ .

#### Multiple Linear Regression: Consumption Frequency – Scenario Two

For the consumption frequency, the second scenario was chosen to identify whether there is a relation between the consumption of Social Media with the consumption of nutritional supplements bought because or through Social Media. Table 24 shows a significant negative correlation of -0.206 between the gender and the consumption frequency was identified. Other correlations were identified, though they are not considered significant given the alpha of 0.05. The following Pearson correlations were calculated for the consumption frequency at scenario two and with the intercept at -14.871.

	<b>Cons. frequency - S2</b>
<b>Cons. frequency - S2</b>	1.000
<b>Gender</b>	<b>-0.206</b>
<b>Birth year</b>	-0.008
<b>Edu. level</b>	0.046
<b>Empl. status</b>	0.093
<b>IG</b>	-0.012
<b>FB</b>	0.119
<b>YT</b>	0.063

Table 24: Pearson Correlation for Consumption Frequency S2

The only significant correlation was identified to be for the variable of the gender, with a significance of 0.01. Additionally, a regression coefficient of -0.419 was calculated for the same variable. Taking into account the intercept of 14.871, this would result in the following regression equation:

$$\text{Consumption frequency} = -0.419(\text{gender}) - 14.871$$

The results show that male consumers have a higher consumption frequency of nutritional supplements compared to female consumers.

#### Multiple Linear Regression: Expenditures– Scenario Two

As for the expenditures, again the second scenario was chosen to calculate the influence of various variables on the expenditures for nutritional supplements purchased through or because of Social

Media. The analysis has shown that there is a significant positive correlation between educational level and the expenditures within scenario two:

	<b>Expenditures S2</b>
<b>Expenditures S2</b>	1.000
<b>Gender</b>	-0.154
<b>Birth year</b>	0.006
<b>Education level</b>	<b>0.291</b>
<b>Level of employment</b>	0.151
<b>Instagram</b>	-0.020
<b>Facebook</b>	-0.018
<b>YouTube</b>	-0.072

Table 25: Pearson Correlation for Expenditures S2

Alone one correlation was identified to be significant at an alpha level of 0.05, with a significance  $p < 0.001$ . The regression coefficient for the education level was calculated to be 0.216 with an intercept of 44.051. This results in the following regression equation for the expenditures on nutritional supplements bought through or because of Social Media:

$$\text{Expenditures} = 0.216(\text{education level}) - 44.051$$

This correlation means that the higher the education level of the consumer, the more the expenditures for nutritional supplement purchased through or because of Social Media.

Surprisingly, no significant correlation between the frequency of consumption of Social Media and both variables consumption frequency and expenditures could be identified. This could be explained by the insufficient amount of results and therefore representativeness of the data.

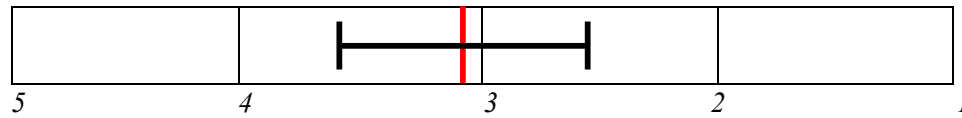
#### 4.1.5 Control-questions

In the last part of the survey, the consumers were asked about their perception of nutritional supplements (using the KATALYSE model as described in the methodology part) and how Social Media might have influenced it. The questions were asked using a Likert scale with a scale from 1 to 5, while 1 being “strongly disagree”, 2 is agree, 3 is neither agree nor disagree, 4 is disagree and 5 being “strongly agree”.

#### 4.1.5.1 Influence by Social Media

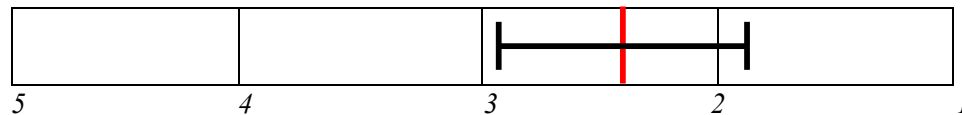
**Question:** I have been influenced to buy nutritional supplements by people I follow on Social Media.

$n=245$ ,  $media=3.1$ ,  $sd=1.3$



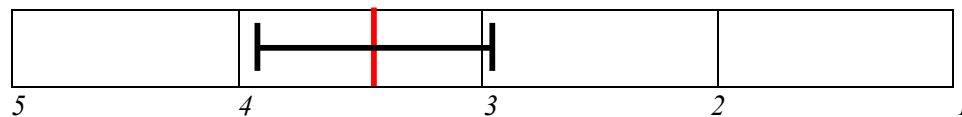
**Question:** I consume more nutritional supplements because it was recommended by individuals/companies on Social Media.

$n=245$ ,  $media=2.4$ ,  $sd=1.3$



**Question:** Social Media has changed my perception about nutritional supplements in a positive way.

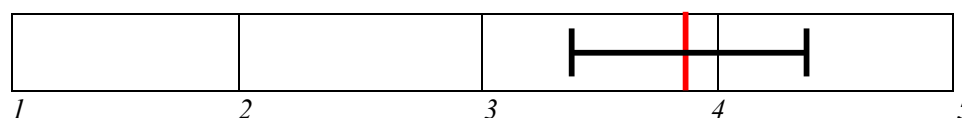
$n=245$ ,  $media=3.4$ ,  $sd=1.3$



**Remarks:** Overall, the majority of consumers have stated that through the usage of Social Media, they have received a more positive attitude towards nutritional supplements. This is further backed up by the following question:

**Question:** Social Media has changed my perception about nutritional supplements in a negative way.

$n=245$ ,  $median=3.9$ ,  $sd=1.1$



**Remarks:** The grading for this question was changed with 5 meaning “disagree” and 1 being “agree”, as the opposite condition as in the previous question was asked.

#### 4.1.5.2 Perception of supplements

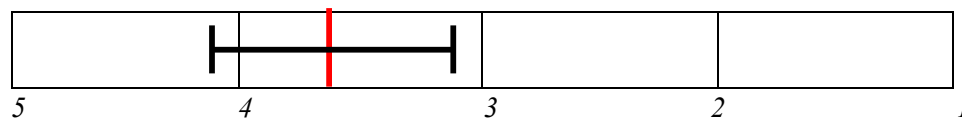
**Question:** Nutritional supplements can have a positive impact on my health.

$n=245$ ,  $median=4.4$ ,  $sd=0.7$



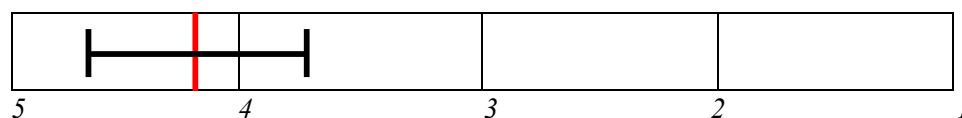
**Question:** Nutritional supplements can help with losing weight.

$n=245$ ,  $median=3.6$ ,  $sd=1.2$



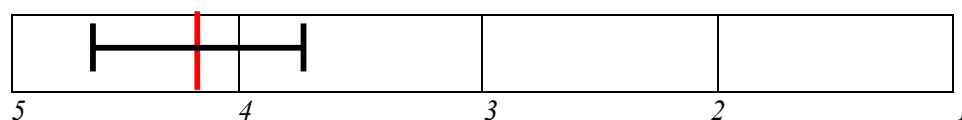
**Question:** Nutritional supplements can help with gaining weight/muscle mass.

$n=245$ ,  $median=4.2$ ,  $sd=0.9$



**Question:** Nutritional supplements can help with the regeneration after a workout.

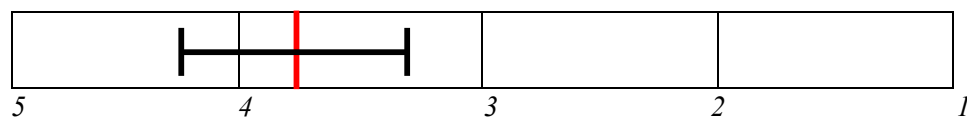
$n=245$ ,  $median=4.2$ ,  $sd=0.8$





**Question:** Nutritional supplements help me to fight the symptoms when I am sick (ex. have a cold).

$n=245$ ,  $median=3.7$ ,  $sd=1.1$



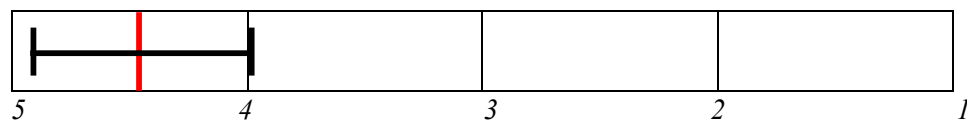
**Question:** Nutritional supplements can help prevent certain illnesses.

$n=245$ ,  $median=4$ ,  $sd=1$



**Question:** Nutritional supplements can help me compensate for certain deficiencies in my nutrition.

$n=245$ ,  $median=4.4$ ,  $sd=0.9$



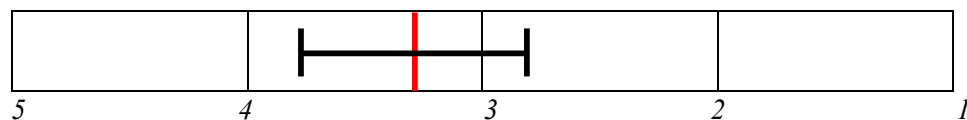
**Question:** I use nutritional supplements to help me lose weight.

$n=245$ ,  $median=4.2$ ,  $sd=1$



**Question:** I use nutritional supplements when I want to gain weight / muscle mass.

$n=245$ ,  $median=3.3$ ,  $sd=1.1$



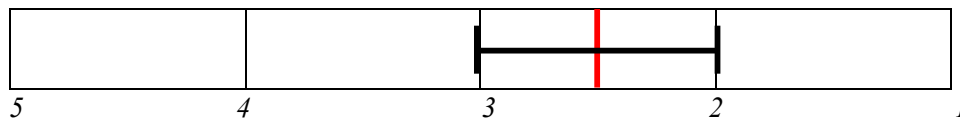
**Question:** I use nutritional supplements when I want to help regeneration after a workout.

$n=245$ ,  $median=4$ ,  $sd=0.9$



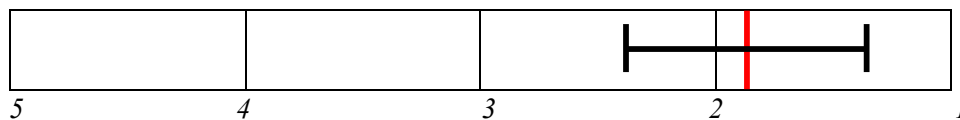
**Question:** I use nutritional supplements when I am sick and want to fight the symptoms (i.e. have a cold).

$n=245$ ,  $median=2.5$ ,  $sd=1.2$



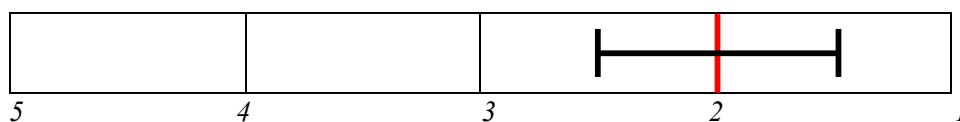
**Question:** I use nutritional supplements when I want to prevent a certain illness.

$n=245$ ,  $median=1.8$ ,  $sd=2.2$



**Question:** I use nutritional supplements to compensate for certain deficiencies in my nutrition.

$n=245$ ,  $median=2$ ,  $sd=1$



Overall, consumers of nutritional supplements have stated to have received a more positive perception of the products because of Social Media. Also, the majority thinks that nutritional supplements can have a positive impact. When the KATALYSE model was applied to identify the motivational perception for nutritional supplementation, it can be said that the consumers do in fact supplement for the reasons given as per the model. The majority of consumers have stated that they believe that supplement may help for various situations as given by the model such as prevention, treatment of symptoms, lifestyle treatment and personal deficits. However, supplementation is not always applied

for the same reasons, which means that a discrepancy between the perception towards nutritional supplements and the actual application of those could be identified for some areas of application. The results have shown that consumers supplement for the reasons of weight control (gain/loss) as well as regeneration after physical activity, however surprisingly, the consumers lack application in the areas of prevention and treatment of symptoms even though the perception was stated to be otherwise.

#### 4.1.5.3 Internal consistency

##### Influence of Social Media

For the influence of Social Media, instrument reliability testing was conducted using the Cronbach alpha test on internal consistency. For a total of four items, the test provided the following results:

Number of items	4
Sum of item variances	6.2
Variance of subject totals	12.8
Cronbach $\alpha$ reliability coefficient	<b>0.7</b>

Table 26: Test of internal consistency for questions regarding Social Media (Likert-Scale)

As per George and Mallery (2003), the following rules apply for the Cronbach alpha coefficient values:

$\geq 0.9$	Excellent
$\geq 0.8$	Good
$\geq 0.7$	Acceptable
$\geq 0.6$	Questionable
$\geq 0.5$	Poor
$< 0.$	Unacceptable

Table 27: Cronbach alpha reliability coefficients as per George and Mallery (2003)

Under these circumstances, it can be said that the internal consistency for the Social Media directed questions can be considered as „acceptable”, which means that overall, the questions were answered in a rather similar way.

### Perception of nutritional supplement

Internal consistency tests were applied on the questions in order to analyze the instrument reliability. For the questions about perception towards nutritional supplements, the total of 13 questions were taken into consideration for the test. The analysis of internal consistency has provided the following results:

Number of items	13.0
Sum of item variances	12.4
Variance of subject totals	41.2
Cronbach $\alpha$ reliability coefficient	<b>0.8</b>

*Table 24: Test of internal consistency for perceptual questions of nutritional supplements (Likert Scale)*

The Cronbach alpha value can be interpreted as “good”, which means that the questions were answered similarly and the applied instrument can be considered as reliable.

## 4.2 Characterization of Consumers

Based on the survey analysis, a profile of the consumer of nutritional supplements is done.

As per this study, the consumers of nutritional supplements are mainly pertaining to the Generation Y, with an average age of 25. They consume Social Media such as Facebook, Instagram and YouTube and content related to the fitness and nutritional supplement industry. The education level is considered to be rather high with a number of consumers having at least graduated on gymnasium level. In addition, the consumers are predominantly employed or full-time students.

The consumers of this study have shown to use Social Media, especially Facebook, more than 2 times per day. They use Social Media mostly for increasing their knowledge about a certain topic and for entertainment reasons. The level of trust in the content that is consumed is considered to be rather high.

In terms of nutritional supplements, a large variety of such are consumed, predominantly Protein supplements and Vitamins and other micro nutrients and their consumption is not necessarily affected when consuming content related to nutritional supplements on Social Media. When purchasing nutritional supplements, the quality is key determinant for the selection of their product, followed by the value for money.

Their major source of information gathering when purchasing nutritional supplements is the internet, however, friends and acquaintances appear to have a rather high influencing power as well. This goes

in line with the main influencing factors when they purchase nutritional supplements through Social Media. The consumers are more likely to purchase nutritional supplements through Social Media if they are given detailed description about the products and when they are shown to have positive reviews. In addition, they like to purchase supplements through Social Media because they might appear to be advertised by influencers with promotional codes.

Their main favored place of purchase of nutritional supplements are online stores, followed by supplement stores. Once the products are purchased, they like to consume between two to six times per week, while spending less than EUR/CHF 50.00 per month for these products.

Consumers of nutritional supplements apply them for multiple reasons, however, nutritional deficiencies (i.e. by being a vegetarian or vegan) were stated to be the main driver for supplementation. Unsurprisingly, they are applied in connection with sports in order to gain weight and/or muscles and to benefit the body regeneration after involving in physical activities. An additional factor that motivates the consumers to supplement their nutrition is illness prevention: In order to stay healthy and to prevent certain diseases, supplements are consumed together with the regular nutrition.

### **4.3 Hypotheses**

In this chapter, the hypotheses described in chapter one were tested on their statistical significance. In order to do that, null-hypotheses were defined for each hypothesis. Significance tests were conducted for each hypothesis as shown in chapter four and compared to the  $\alpha$ -value (0.05) to test if the null-hypothesis can be rejected.

#### **4.3.1 Hypothesis 1**

*H1: Consumers purchase more of a specific kind of nutritional supplements under the influence of Social Media.*

Hypothesis  $H_01$  (hereafter mentioned as  $H_01$ ) is therefore described as follows:

*Consumers do not purchase different kinds of nutritional supplements if under the influence of Social Media.*

The analysis has shown that there were certain nutritional supplements that were purchased more, however, no statistical significance when applying the Chi Square test was identified. Seven different kinds of nutritional supplements were analyzed in this case and resulted in a Chi Square value < critical

value and  $p\text{-value} > p=0.05$  with a degree of freedom (DF) of 7. As a consequence, this means that  $H_1$  cannot be accepted and therefore  $H_01$  is not supported by the underlying data.

#### 4.3.2 Hypothesis 2

The second hypothesis (hereafter mentioned as  $H_2$ ) related to the distribution channel the consumers choose when purchasing supplements under the influence of Social Media. The hypothesis was hereafter:

*$H_2$ : Nutritional supplements purchased under the influence of Social Media are mainly purchased through online stores.*

The null-hypothesis 2 (hereafter mentioned as  $H_02$ ) is therefore:

*$H_02$ : There is no difference in distribution channel for supplements purchased under the influence of Social Media.*

The five different distribution channels for both scenarios of the survey (as described in chapter Methodology) were analyzed with a Chi-Square calculation. The critical value at  $\alpha=0.05$  and  $DF=5$  is 11.07. Given the fact that the Chi-Square value of 31.955 is higher than the Chi-Square critical value at degrees of freedom of 5 and alpha of 0.05, as well as  $p < 0.05$ , it can be said that there is a significant difference between the two analyzed groups. Since the majority of the consumers were stating to purchase the supplements as described in scenario two via online stores, it can be said that the  $H_2$  is supported by the collected data and the  $H_02$  can be rejected.

#### 4.3.3 Hypothesis 3

The hypothesis three (hereafter mentioned as  $H_3$ ) was formulated as follows:

*$H_3$ : Nutritional supplements that are purchased under the influence of Social Media are consumed in a higher frequency.*

The null-hypothesis (hereafter mentioned as  $H_03$ ) is therefore:

*$H_03$ : Nutritional supplements that are purchased under the influence of Social Media are not consumed more frequently.*

The analysis as provided in chapter four has shown that there was an increase in average consumption by 0.07 for the second scenario. In order to analyze if this increase is significant it was decided to

apply a one-tailed Mann-Whitney-U-test with reporting of the asymptotic significance of  $z=0.491$ ,  $p=0.05$  (Universität Zürich, 2015). As the  $z$ -value of 0.491 is lower than the critical value of 1.96 ( $\alpha = 0.05$ ), there is no statistical significance in consumption frequency for nutritional supplements purchased under the influence of Social Media. This means that  $H_03$  cannot be rejected and therefore  $H3$  is not supported by the collected data.

#### 4.3.4 Hypothesis 4

The hypothesis 4 (hereafter mentioned as  $H4$ ) was formulated as follows:

*H4: There is a different kind of motivation for nutritional supplementation under the influence of Social Media.*

The null-hypothesis (hereafter mentioned as  $H_04$ ) is therefore:

*H<sub>04</sub>: Nutritional supplementation is done for the same reasons regardless if purchased under the influence of Social Media or not.*

The analysis has shown that there was indeed different motivation for supplementation however the Chi Square test applied for the nominal data set resulted in no statistical significance of the differences (Chi Square value < critical value and  $p$ -value >  $p=0.05$ ). This means that the  $H_04$  hypothesis cannot be rejected and therefore the  $H4$  hypothesis is not supported by the collected data.

#### 4.3.5 Hypothesis 5

The last hypothesis about the expenditures was formulated in the following way:

*H5: Expenditures for nutritional supplements are higher if purchased under the influence of Social Media.*

Accordingly, the  $H_05$  hypothesis is described as follows:

*H<sub>05</sub>: Expenditures for nutritional supplements are the same if purchased under the influence of Social Media.*

For this hypothesis, the differences in mean between the expenditures of scenario one and scenario two were tested on significance using a one-tailed Mann-Whitney-U test. Since the sample size was higher than 30, asymptotic significance was tested using  $z$ -tests. A  $z$ -value of 1.667 was calculated,

which results in the higher mean in scenario two to be not significant ( $z\text{-value} < \text{critical value } | = 1.96 |$  at  $\alpha = 0.05$ ). The data analysis has shown that the  $H_5$  cannot be supported and therefore  $H_0$  is retained.



## 5 Conclusion

In this chapter, the findings of this thesis are summarized and managerial implications and recommendations are provided. Additionally, the limitations to this study are discussed and a critical evaluation of the thesis is done.

### 5.1 Summary

This study was conducted in order to analyze how the consumer behavior of nutritional supplements is changed under the influence of Social Media. The questionnaire conducted in order to answer the research question was set up by creating two scenarios of purchase of nutritional supplements. One scenario where supplements were not purchased under the influence of Social Media such as Instagram, Facebook or YouTube, and a second scenario that where supplements were purchased under its influence. To complement that, various areas of consumer behavior were included in the questionnaire, in order to statistically prove any difference within those two scenarios. These areas were the awareness phase, the purchase phase and the after-sales phase within the customer buying cycle.

The only a significant difference of consumer behavior of nutritional supplements under the influence of Social Media that could be statistically proven were the distribution channels. The majority of consumers stated to purchase nutritional supplements they had previously seen on Social Media through online stores instead of offline channels such as nutritional supplement stores or sports shops. Though there were indications of change in frequency, expenditures or motivation, they could not be identified to be statistically significant within this study. Reasons for this might be in the chosen methodology, which resulted in a rather complex system for such an analysis, as well as in an insufficient amount of survey responses and non-representativeness of the data.

Furthermore, it can be said that, because of Social Media, consumers have a more positive perception of nutritional supplements. Additionally, the survey has provided insights about the consumers perception towards nutritional supplements. The majority of consumers believe that nutritional supplements can impact the consumers health in a positive way and therefore are applied in various areas such as for illness prevention, lifestyle treatment or personal deficits in nutrition. Lastly, this study has provided insights about the motivation for supplementation, which can provide insights for strategic management and marketing management for companies within this industry (additional information on chapter 5.2 – Managerial Implications).

## 5.2 Managerial Implications

As the literature review as well as the background information has shown, the topic of Social Media is a highly relevant topic and for various industries. Nowadays, Social Media is not only a tool for private persons to share information, but it can also be used for self-employed individuals, entrepreneurs as well as SME and large international companies and can be applied in various ways i.e. marketing (Social Commerce/Social Community), relationship management (Social Community), advertising (Social Publishing/Social Entertainment) but also as distribution channel (Social Commerce) and customer support (Social Community). Social Media such as Instagram and Facebook or YouTube have created a shift in consumer behavior as touchpoints between consumer and company have transferred to digital, fast paced dimensions which promote new means of interaction between them. This requires companies to rethink current client relationship methods and/or the creation of demand and distribution of products.

As for companies that are active in the nutritional supplement industry, Social Media can be considered to be indispensable, since it could be seen as a key success factor in this sector. This is undermined by the fact that a very large number of companies selling nutritional supplements are doing business through Social Media and its tools.

Even though it has not been statistically proven in this study that there are correlations between the consumption of Social Media and the consumption of nutritional supplements, it can be expected that consumers are still highly affected by content of these subjects, as it can be considered to be the result of the regular shift in consumer behavior and market mechanics due to digitalization, especially in the food and beverage and sports industry in which the nutritional supplement industry belongs to. This would require those companies to include additional distribution channels such as online stores (if not yet existing) as the majority of nutritional supplements purchased under the influence of Social Media are purchased through online means. Through the study, it was found out that supplementation is rather commonly applied even if Social Media content related to such is not used actively, which could be an indicator for the market potential not having reached its full potential yet. Implications for management in these regards could be that they would need to implement measures to shift the consumer journey from attention along to the actual after sales to online means including Social Media in order to create a higher degree of awareness or the variety of products as well as influence the perception of consumers towards nutritional supplements. However, since the field of consumer behavior of nutritional supplements has not yet reached its full potential, it can be said that additional research towards identifying the key determinants for distributing nutritional supplements through

Social Media could be conducted by companies within this industry. Since the companies that are active in this industry and on Social Media are expected to own respective data about their customers on Social Media, it could be said that this data could be used to increase the know-how about their own business i.e. by creating consumer profiles which would help identifying the various necessities to satisfy the consumers, but also to identify the key success factors for doing business with nutritional supplements using Social Media.

### **5.3 Recommendations**

The recommendations of this study are based on literature review as well as the findings of the survey.

In general, it is recommended to companies active in the nutritional supplement industry to be involved in Social Media with special emphasis on Facebook, Instagram and YouTube. It is further recommended to the companies to create their presence to a higher degree than just for information purposes, but rather include various aspects of marketing and customer relationship management on the Social Media level. Thus, it is recommended to establish departments within the company specialized in the creation of content for Social Media as well as data collection from it through involving themselves in various levels of interaction with the consumers. This includes collecting customer feedback through providing customer support (Social Community), creation of attention and providing of information (Social Publishing) as well as actively promoting and distributing products through these channels (Social Commerce). Additionally, the study has found out that a large number of consumers are active on Social Media for entertainment purposes. It is therefore recommended to also include the factor of Social Entertainment which could help to increase involvement, and to create an active involvement of the consumers. This could be done by letting consumers actively participate in content creation by creating raffles bound to photo-contests, or the sharing of their own experiences and consumption of nutritional supplements.

Since a considerable number of young individuals are active on Social Media that follow influencers active in this industry, it is recommended to include influencer marketing through Social Media in the own marketing strategy. It has been shown that consumers are highly affected by the impersonation of an “ideal”-self (Solomon, 2015) and is highly utilized as sales promoter. Therefore, it is recommended to select brand ambassadors that promote products indirectly with reviews and product placements in their content creation. In order to maximize the efficiency and effectiveness for such, it is recommended to select the influencers based on various attributes such as number of followers, engagement with the consumers, degree of professionalism and level of know-how.

Since it has been shown that nutritional supplements are able to change the perception of nutritional supplements in a positive way, is also recommended to create content on Social Media aimed at informing consumers about the benefits and fields of application of such. In combination with the promotion of such products, this could benefit the companies in various ways such as an increased rate of word-of-mouth, recommendations but also brand awareness and sales-profit.

Summarized, it is recommended for companies active in the nutritional supplement industry to be operating in Social Media and to use its tools for various areas to support the value-chain such as after sales services, marketing and advertising, customer relationship management but also other areas such as inbound and outbound logistics and information technology. Lastly, a set of recommendations for the various areas of consumer behavior applied in this study is provided:

Area of consumer behavior	Recommendation
Consumer buying cycle: awareness phase	Provide entertaining content through Vlogs, product reviews, inspirational and motivational content, special guests, competitions, engage in differentiating content with a high degree of detail and information
Motivation to follow content related to nutritional supplements	Include opinion leaders in the content
Consumer buying cycle: awareness Phase / purchasing phase	Focus on providing innovative, high quality products
Types of supplements	Monitor and predict trends and address them accordingly
Consumer buying cycle: awareness Phase	Include opinion leaders and other experts in the Social Media content
Information gathering	Provide product details with a high degree of information
	Increase credibility by providing nutritional facts and details about ingredients
	Provide independent product laboratory analysis to increase credibility
Consumer buying cycle: awareness Phase / purchasing phase	Establish Social Media presence for branding and control content to establish positive product reviews
Sales promotion	Provide detailed descriptions about products
	Provide purchasable and free samples for product testing
	Promotional codes for short-term product advertisements (i.e. when launching new products or dismissing certain products from portfolio)

	Establish portfolio of influencers
Consumer buying cycle: purchasing phase	Provide online shopping possibilities
Place of purchase	Provide direct links on Social Media posts to online shop or apply for direct shopping tools through the specific platforms
Consumer buying cycle: awareness Phase	Provide information about fields of application of supplements
Motivational factors for consumption of supplements	Create content related to the various fields of application as per KATALYSE model
	Transmit positive image of nutritional supplements through emphasizing benefits of products

Table 28: Overview of recommendations for various areas of consumer buying cycle - own visualization

## 5.4 Limitations

The limitations of this study are discussed by addressing various fields such as the available literature, the conducted survey and the general scope of work.

### 5.4.1 Available literature

Because Social Media and especially Influencer Marketing are a rather “new” phenomenon in market research, the literature available in this field can be considered as rather limited. Though there is a substantial number of guidebooks for companies that want to involve themselves in this business, literature lacks actual theory behind Social Media and Influencer Marketing. This means that the current available literature does not provide a literature versatile enough to be able to increase the know-how about the topic from a scientific and theoretical perspective. Especially for Influencer Marketing, except guidelines who explain how this particular kind of marketing could be conducted, theoretical description about the functionalities and methodologies for this subject are yet to be published. As a consequence, when dealing with a subject such as influencer marketing, research is limited to interviews with actual influencers or companies applying Influencer Marketing, or with observations of such individuals through the analysis of content on Social Media. This means that in terms of literature for Influencer Marketing, this study was limited to the analysis of such influencers through the consumption of Social Media, as no interview with influencers could be established.

### **5.4.2 Survey**

The main limitation of the survey is considered to be the application of the snowball sampling. Even though a large number of participants can be reached in theory, in this case, the actual participation rate did not reach its expected number of 500 responses. Various measures in order to promote the survey were performed including personal approach, sharing of the survey through email and Social Media, promotion of the survey on various internet forums and the approaching of influencers.

As for the personal approach of individuals at target-group oriented areas, it did not provide enough responses as the personal approach of consumers was not granted by companies such as PowerFood or OldSchoolGym24 or ASVZ (see methodology). The ASVZ as described in the methodology was further not able to be contacted or visited due to the facility being on summer holidays during the time of the survey being active. An alternative fitness center in a geographically convenient location (Basefit Winterthur-Töss) was chosen for this reason, however, the participation was limited to 11 participants only. In terms of influencers, from a total of nine influencers, only one individual was willing to help spreading the survey. Lastly, the promotion of the survey on various internet-forums was not allowed by the moderators of the chosen platforms. Summarized, it can be said that the promotion of the survey was limited to various circumstances which reduced the participation rate of the survey. In the end, the participation of 353 was not enough to establish representativeness and significance of the data.

### **5.4.3 Scope of Work**

This master's thesis was conducted within a time frame of four month during the summer break for many institutions and faculties in Switzerland. Given these circumstances, the promotion and sharing of the survey was limited due to time constraints and therefore did not offer enough time to gather the required number of participants.

## **5.5 Critical Evaluation**

In this chapter, the applied methodology in this paper as well as the literature and findings are evaluated on a self-evaluation basis. Lastly, the future and further research based on literature and findings are provided.

### **5.5.1 Methodology**

In a first instance, the sampling for this master's thesis is evaluated. Since a snowball sampling was applied, the survey was exposed to the risk of reduced representativeness and it is not possible to reliably evaluate and identify patterns in the distribution of the acquired data. Additionally, as described before, the evaluation of sampling errors and statistical inferences of the acquired sample to a population cannot be applied in this case, as snowball sampling is missing random selection.

In addition, the chosen instruments as well as the creation of a control and experiment group using survey-workflows in the conducted survey are not considered to represent a suitable design approach for the identification of the impact of Social Media on consumer behavior. The reason for this being the lack of in-depth re-creation of a customer journey in the context of purchasing nutritional supplements, especially in combination with Social Media. Even though the survey might provide insights on the motivation for and perception about nutritional supplements, its design did not support the data collection and analysis of an entire customer buying cycle for such products. Also, the approach and behavior of a consumer on Social Media was not surveyed, which leads to a lack of traceability of the actual touch points and process a customer undertakes when purchasing such products. Moreover, it was not analyzed which mechanics applied by nutritional supplement companies on Social Media actually may lead to a purchase of their products (i.e. product placements, reviews, sales, motivational content etc.).

Overall, it can be said that the study may provide insights on specific areas of consumer behavior of which certain managerial implications and recommendations can be derived of, but with the given timeframe it does not provide fundamental understanding for an in-depth scientific analysis of consumer behavior within this field. It is expected that the selection of independent focus groups divided by control and experiment groups for an extended period of time would provide more in-depth findings about how the consumer behavior differs if exposed to the specified content Social Media.

## **5.6 Further Research**

This study provides an insight about the consumer behavior of nutritional supplements both and without the influence of Social Media. It addresses the areas of consumer behavior in this field on a basic level, however, it is not able to recreate an entire customer journey when purchasing nutritional supplements under the influence of Social Media. In future research, qualitative research methods conducted over an extended period of time could provide additional information about the process a consumer undertakes when consuming Social Media. Additionally, this could promote the analysis

of consumer behavior on a comparatively profound level, i.e. by drawing conclusions on the various products, actual Social Media consumed and the content provided in them.

Summarized, further research could include breaking down the impact analysis on a process and transactional level, which would help to gather fundamental details about how consumer act on Social Media and the particularity of the catalysts for purchase.



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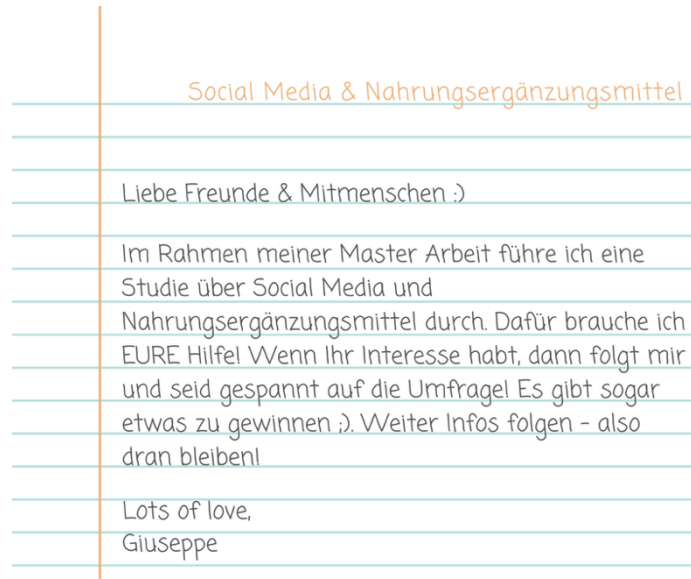
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## 7 Annex

### 7.1 Pre-Survey Arrangements



*Annex 1: Post 1 on Facebook-Page (Canva, 2017)*



*Annex 2: Post nr. 1 on Instagram (Canva, 2017)*





*Annex 3: Post nr. 2 on Facebook-Page and Instagram-Channel (Canva, 2017)*



*Annex 4: Post nr. 3 on Facebook Page and Instagram Channel (Canva, 2017)*



*Annex 5: Post nr. 4 on Instagram and Facebook (Canva, 2017)*



WHOA!

DID YOU KNOW?

*Annex 6: Post nr. 5 on Instagram and Facebook (Canva, 2017)*



*Annex 7: Post nr. 6 on Instagram and Facebook (Canva, 2017)*



*Annex 8: Post nr. 8 on Instagram and Facebook*



Annex 9: Post on Social Media Influencer Christian Wolf (Facebook, 2017)

## 7.2 Survey – German Version

Bitte wählen Sie eine Sprache aus. Please choose a language.

☐ Deutsch

☐ English

»

(change text)

## Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

0 %

### Willkommen!

Herzlich willkommen zu meiner Umfrage!

Vielen Dank, dass Du Dir die Zeit nimmst, um an meiner Umfrage teilzunehmen. Das Ausfüllen des Fragebogens dauert nur 5-6 Minuten und ist komplett anonym.

Die Umfrage ist Teil meiner Master-Arbeit an der Zürcher Hochschule für Angewandte Wissenschaft. Thema der Arbeit ist es, den Einfluss von Social Media auf die Wahrnehmung und den Konsum von Nahrungsergänzungsmittel zu analysieren.

Unter den Teilnehmern verlose ich 3x einen Warengutschein von CHF/EUR 30.00 für Deinen Supplement-Online-Store Deiner Wahl! Es lohnt sich also mitzumachen!

Vielen Dank für die Teilnahme!

[Zurück](#)[Weiter](#)[\(change text\)](#)

## Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

7 %

**Benutzt Du Soziale Medien wie Facebook, Instagram und/oder YouTube etc.? \***

☐ Ja☐ Nein

### Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

13 %

**Folgst Du Personen/Unternehmen, die Inhalte über folgende Themenbereiche posten? (Mehrfachnennungen möglich) \***

-Sport (Jeglicher Art: Fitness, Bodybuilding, CrossFit, Laufen, Fahrrad, Extremsport usw.)

-Ernährung- und Ernährungstipps

-Nahrungsergänzungsmittel

-Gesunder Lifestyle

- ☐ Ja
- ☐ Nein

### Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

20 %

**Konsumierst Du oder hast Du in vergangener Zeit Nahrungsergänzungsmittel jeglicher Form konsumiert? \***

Hinweis: Nahrungsergänzungsmittel (z.B. Vitamin-Präparate, Proteinpulver etc.) sind Produkte, die eine normale Ernährung auf eine vereinfachte Weise unterstützen können und treten meistens in Form von Tabletten, Kapseln, Pulver etc. auf.

- ☐ Ja
- ☐ Nein

### Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

27 %

**Werden von Deinen gefolgt Kanälen Produkte wie Nahrungsergänzungsmittel präsentiert oder sogar empfohlen? \***

- ☐ Ja, und ich mag diese Posts.
- ☐ Ja, ich stehe dem jedoch neutral gegenüber.
- ☐ Ja, aber ich mag diese Posts nicht.
- ☐ Ich weiss es nicht / ist mir egal.
- ☐ Nein, ich will auch keine sehen.
- ☐ Nein, aber ich würde gerne Posts über Nahrungsergänzungsmittel sehen.

## Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

33 %

Bitte gib Dein Geschlecht an. \*

- ☐ Männlich
- ☐ Weiblich
- ☐ Sonstiges

Bitte gebe Deinen Ihren Jahrgang an. \*

Bitte wählen ▾

Bitte gib Deinen Wohnort an. \*

- ☐ Schweiz
- ☐ Deutschland
- ☐ Österreich
- ☐ Liechtenstein
- ☐ Luxemburg
- ☐ Sonstiges

**Was ist der höchste Bildungsgrad, den Du bisher erlangt haben? \***

- ☐ Grundschule
- ☐ Realschule
- ☐ Sekundarschule
- ☐ Abitur / Matura
- ☐ Berufsmaturität
- ☐ Bachelor
- ☐ Master
- ☐ Doktorat
- ☐ Andere

**Welche der folgenden Kategorien beschreibt am besten Deinen Beschäftigungsstatus? \***

- ☐ Schüler/-in Gymnasium, Sekundarschule
- ☐ Lehrling
- ☐ Student/-in
- ☐ Teilzeitstudent/-in
- ☐ Arbeitend
- ☐ Auf Stellensuche
- ☐ Sonstiges



## Umfrage zum Konsum von Nahrungsergänzungsmitteln / Survey about the consumption of nutritional supplements

40 %

Nun werden ein paar Fragen zu deinem Verhalten im Zusammenhang mit den Sozialen Medien gestellt. Bitte beantworte die Fragen nach deinen Erfahrungen, ganz natürlich und nach deinem Gefühl.

### Wie oft nutzt Du die folgenden Social-Media-Kanäle?

	mehr als 2x täglich	1-2x täglich	mehr als 1x wöchentlich	maximal 1x wöchentlich	nie
Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Welchen Kanälen folgst du auf den genannten Social-Media-Plattformen? (Mehrfachnennungen möglich) \*

- ☐ Private Kanäle (Familie, Freunde, Bekannte)
- ☐ Öffentliche Kanäle (Influencers, Marken, Unternehmen, Promis, Memes, Motivations-Kanäle, fiktive Kanäle, sonstige Individuen)
- ☐ Sonstige

### Warum folgst Du diesen Kanälen? (Mehrfachnennungen möglich). \*

- ☐ Ich will in meinem Freundes- und Bekanntenkreis mitreden können.
- ☐ Ich finde die Posts informativ und interessant.
- ☐ Ich vertraue der Expertise dieser Kanäle.
- ☐ Ich sehe in diesen Personen/Unternehmen ein Vorbild.
- ☐ Ich kann mich sehr gut mit diesen Personen/Unternehmen identifizieren.
- ☐ Ich fühle mich durch die Posts motiviert, Sport zu treiben.
- ☐ Ich fühle mich durch diese Kanäle unterhalten.
- ☐ Ich bin durch diese Kanäle stets auf dem neusten Stand der Dinge.

## Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

47 %

Die nächsten Fragen betreffen den Konsum von Nahrungsergänzungsmittel. Bitte beantworte die Fragen nach deinen Erfahrungen, ganz natürlich und nach deinem Gefühl.

**Du hast erwähnt, dass Du bereits Nahrungsergänzungsmittel konsumiert hast oder dies derzeitig noch tust. Welche Art von Nahrungsergänzungsmittel sind/waren das? (Mehrfachnennungen möglich). \***

- ☐ Proteine (z.B. Whey-Protein, Casein-Protein, Pflanzliches Protein usw.)
- ☐ Kohlenhydrate (z.B. verschiedene Zuckerarten, Kohlenhydrate-Shakes usw.)
- ☐ Fette (z.B. Omega-3 Fettsäuren, Fischöl, Pflanzliche Öle, usw.)
- ☐ Kreatin
- ☐ Vitamine (jeglicher Art)
- ☐ Mineralstoffe und Spurenelemente (z.B. Zink, Eisen, Magnesium usw.)
- ☐ Aminosäuren (z.B. Verzweigkettige Aminosäuren, Essentielle Aminosäuren, L-Carnitin usw.)
- ☐ Leistungsförderer (z.B. Koffeinpräparate, Trainings-Booster usw.)
- ☐ Sonstiges

**Wie hast Du Dich vor dem Kauf der Supplemente über die Produkte informiert? \***

- ☐ Durch das Internet (Blogs, Webseite des Anbieters, Vergleichsportale usw.)
- ☐ Durch Freunde/Familie
- ☐ Durch Deine(n) Arzt/Ärztin
- ☐ Durch Werbung (Social Media, Zeitschriften usw.)
- ☐ Ich habe mich vorher nicht informiert.
- ☐ Sonstiges

**Bitte ordne die folgenden Produktmerkmale nach deren Wichtigkeit für Deine Kaufentscheidung von Nahrungsergänzungsmittel ein (1 = oberste Priorität) \***

- ⬆  ⬆ Marke
- ⬆  ⬆ Qualität
- ⬆  ⬆ Preis
- ⬆  ⬆ Preis-/Leistungsverhältnis
- ⬆  ⬆ Haltbarkeit
- ⬆  ⬆ Herkunft der Zutaten
- ⬆  ⬆ Verpackungsmaterial (z.B. Material, Beutel oder Dose)

**Wo erwirbst/erwarbst Du diese Supplemente? \***

- ☐ In Online-Shops
- ☐ In Supermärkten
- ☐ In Sport-Läden
- ☐ In Läden für Nahrungsergänzungsmittel
- ☐ In der Drogerie/Apotheke
- ☐

**Wie oft konsumierst/konsumiertest Du ungefähr diese Nahrungsergänzungsmittel? \***

- ☐ Weniger als 1x wöchentlich
- ☐ 1x wöchentlich
- ☐ 2-6x wöchentlich
- ☐ 1x täglich
- ☐ Mehr als 1x täglich

**Warum konsumierst oder konsumiertest Du diese Nahrungsergänzungsmittel? \***

- ☐ Weil es mir hilft, Gewicht zu verlieren.
- ☐ Weil es mir hilft, an Gewicht/Muskelmasse zuzunehmen.
- ☐ Weil es meine Regeneration nach einem Training fördert.
- ☐ Weil ich damit Defizite in meiner Ernährung kompensieren kann
- ☐ Weil es mir bei der Symptombekämpfung von Krankheiten hilft.
- ☐ Zur Prävention von Krankheiten.
- ☐ Andere Gründe

**Wieviel Geld gibst/gabst Du monatlich und ungefähr für diese Nahrungsergänzungsmittel aus? \***

- ☐ Weniger als CHF/EUR 50
- ☐ CHF/EUR 50 - 60
- ☐ CHF/EUR 61 - 70
- ☐ CHF/EUR 71 - 80
- ☐ Mehr als CHF/EUR 80

### Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

53 %

Im letzten Teil dieser Umfrage beantworte bitte die folgenden Fragen zu Deinem Konsum von Nahrungsergänzungsmittel unter der Berücksichtigung von Social Media.

**Hast Du schon mal Nahrungsergänzungsmittel gekauft, weil es von einem Kanal, dem Du folgst, in einem Post empfohlen oder platziert wurde? \***

- ☒ Ja
- ☐ Nein

### Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

60 %

**Du hast auf die vorherige Frage mit "Ja" geantwortet. Was hat dich dazu bewogen, Supplemente, die empfohlen oder platziert wurden, einzukaufen? \***

- ☐ Die Produkte wurden positiv bewertet.
- ☐ Die Produkte wurden sehr detailliert beschrieben.
- ☐ Ich konnte durch die Social-Media-Kanäle durch reduzierte Preise profitieren (z.B. durch Rabatt-Codes).
- ☐ Die Posts hat mein Interesse in die Produkte geweckt und ich wollte sie testen.

**Du hast die vorherige Frage mit "Nein" beantwortet. Was hält Dich davon ab, Supplemente, die empfohlen oder platziert werden, einzukaufen? \***

- ☐ Die Produkte wurden negativ bewertet.
- ☐ Die Produkte wurden ungenügend detailliert beschrieben.
- ☐ Nein, denn ich konnte nicht durch reduzierte Preise profitieren (z.B. Rabatt-Codes).
- ☐ Die Produkte in den Posts interessierten mich einfach nicht.

## Umfrage zum Konsum von Nahrungsergänzungsmittel / Survey about the consumption of nutritional supplements

73 %

**Welche Art von Nahrungsergänzungsmittel hast Du wegen den Social-Media-Kanälen gekauft? (Mehrfachnennungen möglich). \***

- ☐ Proteine (z.B. Whey-Protein, Casein-Protein, Pflanzliches Protein usw.)
- ☐ Kohlenhydrate (z.B. Verschiedene Zuckerarten, Kohlenhydrate-Shakes usw.)
- ☐ Fette (z.B. Omega-3 Fettsäuren, Fischöl, Pflanzliche Öle, usw.)
- ☐ Kreatin
- ☐ Vitamine (jeglicher Art)
- ☐ Mineralstoffe und Spurenelemente (z.b. Zink, Eisen, Magnesium usw.)
- ☐ Aminosäuren (Verzweigkettige Aminosäuren, Essentielle Aminosäuren usw.)
- ☐ Leistungsförderer (Koffeinpräparate, Trainings-Booster usw.)

**Wie oft konsumierst/konsumierst Du ungefähr diese Nahrungsergänzungsmittel? \***

- ☐ Weniger als 1x wöchentlich
- ☐ 1x wöchentlich
- ☐ 2-6x wöchentlich
- ☐ 1x täglich
- ☐ Mehr als 1x täglich

**Warum konsumierst/konsumierst Du diese Nahrungsergänzungsmittel? \***

- ☐ Weil es mir hilft, Gewicht zu verlieren.
- ☐ Weil es mir hilft, an Gewicht/Muskelmasse zuzunehmen.
- ☐ Weil es meine Regeneration nach einem Training fördert.
- ☐ Weil ich damit Defizite in meiner Ernährung kompensieren kann.
- ☐ Weil es mir bei der Symptombekämpfung von Krankheiten hilft.
- ☐ Zur Prävention von Krankheiten.
- ☐ Andere Gründe

**Wo kaufst/kaufst Du dir die Supplemente, welche von Persönlichkeiten/Unternehmen auf den Sozialen Medien empfohlen oder platziert wurden? \***

- ☐ In Online-Shops
- ☐ In Supermärkten
- ☐ In Sport-Läden
- ☐ In Läden für Nahrungsergänzungsmittel
- ☐ In der Drogerie
- ☐ Sonstiges



**Wieviel Geld gibst/gabst Du monatlich ungefähr für diese Nahrungsergänzungsmittel aus? \***

- ☐ Weniger als CHF/EUR 50
- ☐ CHF/EUR 50 - 60
- ☐ CHF/EUR 61 - 70
- ☐ CHF/EUR 71 - 80
- ☐ Mehr als CHF/EUR 80

**Ich wurde von Personen/Unternehmen auf Social Media beeinflusst, Nahrungsergänzungsmittel zu kaufen. \***

- ☐ Trifft zu    ☐ Trifft eher zu    ☐ Unentschlossen    ☐ Trifft eher nicht zu    ☐ Trifft nicht zu

**Ich konsumiere Nahrungsergänzungsmittel, weil es auf Social Media empfohlen wird. \***

- ☐ Trifft zu    ☐ Trifft eher zu    ☐ Unentschlossen    ☐ Trifft eher nicht zu    ☐ Trifft nicht zu

**Ich habe wegen Social Media ein positiveres Bild von Nahrungsergänzungsmittel vermittelt bekommen. \***

- ☐ Trifft zu    ☐ Trifft eher zu    ☐ Unentschlossen    ☐ Trifft eher nicht zu    ☐ Trifft nicht zu

**Ich habe wegen Social Media ein negativeres Bild von Nahrungsergänzungsmittel vermittelt bekommen. \***

- ☐ Trifft zu    ☐ Trifft eher zu    ☐ Unentschlossen    ☐ Trifft eher nicht zu    ☐ Trifft nicht zu

**Nahrungsergänzungsmittel können eine positive Auswirkung auf meine Gesundheit haben. \***

- ☐ Trifft zu    ☐ Trifft eher zu    ☐ Unentschlossen    ☐ Trifft eher nicht zu    ☐ Trifft nicht zu

**Nahrungsergänzungsmittel können bei der Gewichtsabnahme helfen. \***

☐ Trifft zu   ☐ Trifft eher zu   ☐ Unentschlossen   ☐ Trifft eher nicht zu   ☐ Trifft nicht zu

**Nahrungsergänzungsmittel können bei der Zunahme von Gewicht/Muskelmasse helfen. \***

☐ Trifft zu   ☐ Trifft eher zu   ☐ Unentschlossen   ☐ Trifft eher nicht zu   ☐ Trifft nicht zu

**Nahrungsergänzungsmittel können die Regeneration nach sportlicher Aktivität fördern. \***

☐ Trifft zu   ☐ Trifft eher zu   ☐ Unentschlossen   ☐ Trifft eher nicht zu   ☐ Trifft nicht zu

**Nahrungsergänzungsmittel können zur Symptombekämpfung einer Krankheit (z.B. Erkältung) helfen. \***

☐ Trifft zu   ☐ Trifft eher zu   ☐ Unentschlossen   ☐ Trifft eher nicht zu   ☐ Trifft nicht zu

**Nahrungsergänzungsmittel können zur Prävention von gewissen Krankheiten helfen. \***

☐ Trifft zu   ☐ Trifft eher zu   ☐ Unentschlossen   ☐ Trifft eher nicht zu   ☐ Trifft nicht zu

**Nahrungsergänzungsmittel können mir helfen, Defizite in meiner Ernährung zu kompensieren. \***

☐ Trifft zu   ☐ Trifft eher zu   ☐ Unentschlossen   ☐ Trifft eher nicht zu   ☐ Trifft nicht zu

**Wenn ich abnehmen will, benutze ich Nahrungsergänzungsmittel. \***

☐ Trifft zu ☐ Trifft eher zu ☐ Unentschlossen ☐ Trifft eher nicht zu ☐ Trifft nicht zu

**Wenn ich an Gewicht/Muskelmasse zunehmen will, benutze ich Nahrungsergänzungsmittel. \***

☐ Trifft zu ☐ Trifft eher zu ☐ Unentschlossen ☐ Trifft eher nicht zu ☐ Trifft nicht zu

**Wenn ich meine Regeneration nach dem Sport unterstützen will, benutze ich Nahrungsergänzungsmittel. \***

☐ Trifft zu ☐ Trifft eher zu ☐ Unentschlossen ☐ Trifft eher nicht zu ☐ Trifft nicht zu

**Wenn ich Krankheitssymptome erkenne, benutze ich Nahrungsergänzungsmittel. \***

☐ Trifft zu ☐ Trifft eher zu ☐ Unentschlossen ☐ Trifft eher nicht zu ☐ Trifft nicht zu

**Weil ich gewisse Krankheiten vorbeugen will, benutze ich Nahrungsergänzungsmittel. \***

☐ Trifft zu ☐ Trifft eher zu ☐ Unentschlossen ☐ Trifft eher nicht zu ☐ Trifft nicht zu

**Weil ich gewisse Defizite in der Ernährung kompensieren will, benutze ich Nahrungsergänzungsmittel. \***

☐ Trifft zu ☐ Trifft eher zu ☐ Unentschlossen ☐ Trifft eher nicht zu ☐ Trifft nicht zu

**Die Umfrage ist hiermit beendet - Ich danke Dir vielmals für Deine Teilnahme!**

**Als kleines Dankeschön fürs Mitmachen verlose ich 3x einen Warengutschein von CHF/EUR 30.00 für Deinen Supplement-Online-Store Deiner Wahl. Um beim Gewinnspiel mitzumachen, brauchst Du lediglich Deine E-Mail Adresse oder deinen Facebook/Instagram- oder Snapchat Namen anzugeben! Viel Glück!!**

VALIDIERUNGSCODE FÜR POLLPOOL-BENUTZER (WWW.POLL-POOL.COM): **SERV**

### 7.3 Survey – English Version

#### Welcome!

Hello and welcome to my survey!

Thank you very much for taking your time to participate with my study!

The survey is part of my master thesis at the Zurich University of Applied Sciences about the influence of Social Media on the perception and consumption of nutritional supplements. The data gathered through the survey is fully anonymous and will be used for scientific purposes only. It takes only five to six minutes to complete and I am going to raffle 3x a gift card of CHF/EUR 30.00 for the supplement online store of your choice! :-)

Thanks for participating!

#### Do you use Social Media such as Facebook, Instagram and/or YouTube etc.? \*

☐ Yes

☐ No

#### Do you follow any individual/company related to one of the following activities? \*

-Sports (of any kind: fitness, bodybuilding, CrossFit, running, cycling, extreme sports etc.)

-Nutrition and nutritional tips

-Nutritional supplements

-Healthy lifestyle

☐ Yes

☐ No

#### Do you consume nutritional supplements of any kind or have you consumed them in the past? \*

Note: Nutritional supplements (ex. vitamins, protein powder etc.) are products that can help a normal diet in a simplified way and most often come as pills, capsules, powders etc.

☐ Yes

☐ No

**Do the persons/companies you follow recommend or provide information about nutritional supplements? \***

- ☐ Yes and I like it.
- ☐ Yes, but I have a neutral opinion about it.
- ☐ Yes, but I don't like it.
- ☐ I don't know / I don't care.
- ☐ No, and I do not want to see anything related to this.
- ☐ No, but I would like to see them post information about supplements.

**Please select your gender. \***

☐ Male

☐ Female

☐ Other

**Please choose the year you were born in: \***

**Please choose your country of residence: \***

☐ Switzerland

☐ Germany

☐ Austria

☐ Liechtenstein

☐ Luxembourg

☐ Other

**Level of education \***

- ☐ Elementary School
- ☐ High School
- ☐ Advanced Level High School
- ☐ Gymnasium
- ☐ Professional certification
- ☐ Bachelor
- ☐ Master
- ☐ Doctor
- ☐ Other

**Which of the following categories best describes your current employment status? \***

- ☐ Attending school (Middle School, High School)
- ☐ Apprenticeship
- ☐ Full-time student
- ☐ Part-time student
- ☐ Working
- ☐ Unemployed
- ☐ Other



The following questions will be about your Social Media behavior. Please try to answer these questions naturally, based on your experiences and your feelings.

**How often do you use the mentioned Social Media channels?**

	More than 2x per day	1-2x per day	more than 1x per week	maximum 1x per week	never
Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**What kind of channels do you follow on the mentioned Social Media platforms? (Multiple-choice possible) \***

- ☐ Private channels (family, friends, etc.)
- ☐ Public channels (influencers, brands, companies, celebrities, other individuals, fictional characters, motivational channels etc.)
- ☐ Other

**Why do you follow these individuals on Social Media? (Multiple-choice possible) \***

- ☐ Because I want to be able to talk about it with friends.
- ☐ The posts are informative and interesting.
- ☐ I trust their expertise in their field.
- ☐ The company/individual represents an example I want to follow.
- ☐ I identify with these companies/individuals.
- ☐ The posts from these individuals/companies motivate me to do sports.
- ☐ These companies/individuals entertain me.
- ☐ They always keep me up to date.

This part of the survey contains questions related to the consumption of nutritional supplements. Please try to answer these questions as honest and natural as possible.

**You mentioned that you have consumed nutritional supplements in the past or that you still use them. What kind of supplements are/were these? (Multiple-choice possible). \***

- ☐ Proteins (ex. whey-protein, casein-protein, herbal protein etc.)
- ☐ Carbohydrates (ex. various types of sugar, carbohydrate-shakes etc.)
- ☐ Fats (ex. omega-3, fish oil, vegetable oils etc.)
- ☐ Creatine
- ☐ Vitamins (of any kind)
- ☐ Minerals and other micro nutrients (ex. zinc, iron, magnesium etc.)
- ☐ Amino-acids (ex. branched-chain amino acids, essential amino acids etc.)
- ☐ Performance boosters (ex. caffeine supplements, workout boosters etc.)

**How did you inform yourself about the products prior to your purchase? (Multiple-choice possible) \***

- ☐ Through the internet (blogs, webpages, comparison sites etc.)
- ☐ Through friends/family
- ☐ Through a doctor
- ☐ Through advertisements (social media, magazines etc.)
- ☐ I did not inform myself.
- ☐ Other

**Please rank the following product attributes based on the importance for your purchasing decision of nutritional supplements. \***

- ⬆  Brand
- ⬆  Quality
- ⬆  Price
- ⬆  Value for money
- ⬆  Longevity
- ⬆  Origins of ingredients
- ⬆  Packaging material (ex. material, bag or container etc.)

**Where did/do you buy these supplements? (Multiple-choice possible) \***

- ☐ Online stores
- ☐ Supermarkets
- ☐ Sports shops
- ☐ Specialised shops for nutritional supplements
- ☐ Pharmacy/Drugstore
- ☐

**Approximately how often did/do you use these supplements? \***

- ☐ Less then 1x per week
- ☐ 1x per week
- ☐ 2-6x per week
- ☐ 1x per day
- ☐ More than 1x per day

**Why do/did you consume these nutritional supplements? \***

- ☐ Because they help me to lose weight.
- ☐ Because they help me to gain weight/muscle mass.
- ☐ Because they help with the regeneration after a workout.
- ☐ Because I can compensate for deficiencies in my nutrition through them.
- ☐ Because it helps me fight against the symptoms of becoming sick.
- ☐ I use them as a preventive measure against illnesses.
- ☐ Other reasons

**Approximately how much money do/did you spend each month for nutritional supplements? \***

- ☐ Less than CHF/EUR 50
- ☐ CHF/EUR 50 - 60
- ☐ CHF/EUR 61 - 70
- ☐ CHF/EUR 71 - 80
- ☐ More than CHF/EUR 80

Lastly, please answer the following questions about your consumption of nutritional supplements in connection with Social Media.

**Have you ever purchased nutritional supplements based on a recommendation or a product-placement by a person/company you follow on Social Media? \***

- ☐ Yes
- ☐ No

**You have answered the previous question with "Yes...". What exactly motivated you to purchase a certain supplement that was placed or recommended in a post? Please describe in short. \***

- ☐ The products received positive reviews.
- ☐ The products were described very detailed.
- ☐ Because of the Social Media channels, I was able to profit from reduced prices (ex. through promotion-codes).
- ☐ The posts got me very interested in the products and I wanted to test them.

**You have answered the previous question with "No...". What prevented you to purchase a certain supplement that was placed or recommended in a post? Please describe in short. \***

- ☐ The products received negative reviews.
- ☐ The products were not described detailed enough .
- ☐ I was not able to profit from reduced prices (ex. promotion-codes).
- ☐ The mentioned products in the posts didn't catch my interest.

**What kind of supplements have you purchased because of Social Media so far? (Multiple-choice possible) \***

- ☐ Proteins (ex. whey-protein, casein-protein, herbal protein etc.)
- ☐ Carbohydrates (ex. various types of sugar, carbohydrate-shakes etc.)
- ☐ Fats (ex. omega-3, fish oil, vegetable oils etc.)
- ☐ Creatine
- ☐ Vitamins (of any kind)
- ☐ Minerals and other micro nutrients (ex. zinc, iron, magnesium etc.)
- ☐ Amino-acids (ex. branched-chain amino acids, essential amino acids etc.)
- ☐ Performance boosters (ex. Caffeine supplements, workout boosters etc.)
- ☐ Others

**Approximately how often do you consume these nutritional supplements? \***

- ☒ Less than 1x per week
- ☐ 1x per week
- ☐ 2-6x per week
- ☐ 1x per day
- ☐ More than 1x per day

**Why do/did you consume these nutritional supplements? \***

- ☒ Because they help me to lose weight.
- ☐ Because they help me to gain weight/muscle mass.
- ☐ Because they help with the regeneration after a workout.
- ☐ Because I can compensate for deficiencies in my nutrition through them.
- ☐ Because it helps me fight against the symptoms of becoming sick.
- ☐ I use them as a preventive measure against illnesses.

**Where do/did you purchase these nutritional supplements that were placed in or recommend by Social Media channels?  
(Multiple-choice possible) \***

- ☒ Online Shops
- ☐ Supermarket
- ☐ Sports shops
- ☐ Supplement stores
- ☐ Pharmacy/Drugstore
- ☐ Other

**Approximately how much money do you spend each month for these nutritional supplements? \***

- ☒ Less than CHF/EUR 50
- ☐ CHF/EUR 50 - 60
- ☐ CHF/EUR 61 - 70
- ☐ CHF/EUR 71 - 80
- ☐ More than CHF/EUR 80

**I have been influenced to buy nutritional supplements by people I follow on Social Media. \***

- ☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**I consume more nutritional supplements because it was recommended by individuals/companies on Social Media. \***

- ☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Social Media has changed my perception about nutritional supplements in a positive way. \***

- ☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Social Media has changed my perception about nutritional supplements in a negative way. \***

- ☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Nutritional supplements can have a positive impact on my health. \***

- ☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Nutritional supplements can help with losing weight. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Nutritional supplements can help with gaining weight/muscle mass. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Nutritional supplements can help with the regeneration after a workout. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Nutritional supplements help me to fight the symptoms when I am sick (ex. have a cold). \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Nutritional supplements can help prevent certain illnesses. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**Nutritional supplements can help me compensate for certain deficiencies in my nutrition. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree



**I use nutritional supplements to help me lose weight. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**I use nutritional supplements when I want to gain weight / muscle mass. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**I use nutritional supplements when I want to help regeneration after a workout. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**I use nutritional supplements when I am sick and want to fight the symptoms (i.e. have a cold). \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**I use nutritional supplements when I want to prevent a certain illness. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

**I use nutritional supplements to compensate for certain deficiencies in my nutrition. \***

☐ Strongly agree   ☐ Agree   ☐ Neither agree nor disagree   ☐ Disagree   ☐ Strongly disagree

Die Umfrage ist hiermit beendet - Ich danke Dir vielmals für Deine Teilnahme!

Als kleines Dankeschön fürs Mitmachen verlose ich 3x einen Warengutschein von CHF/EUR 30.00 für Deinen Supplement-Online-Store Deiner Wahl. Um beim Gewinnspiel mitzumachen, brauchst Du lediglich Deine E-Mail Adresse oder deinen Facebook/Instagram- oder Snapchat Namen anzugeben! Viel Glück!!

You have completed the survey. Thank you very much for your participation.

To say thank you, I have arranged a raffle where you can win 3x a gift card of CHF/EUR 30.00 for the supplement online store of your choice! All you need to do to get a chance to win is submit your email address, Instagram or Facebook/Snapchat username ;-) Good luck!

## 7.4 Contacted Influencers

Approached influencers for the survey about nutritional supplements and social media - Master Thesis of Giuseppe Renga

Name of influencer	Social Media Channels	Contacted through	Date of contact	Status	Date of promotion	Survey Publishing Platform
Nils Schlieper	YouTube, Instagram, SnapChat	<a href="mailto:nilsschlieper@live.de">nilsschlieper@live.de</a>	18.07.17	Rejected	-	-
Sepehr Bahadori	YouTube, Instagram, SnapChat, iTunes Podcasts, Facebook	<a href="mailto:instagram_coaching@brosefitne">instagram_coaching@brosefitne</a>	18.07.17	Rejected	-	-
Coach Burak	YouTube, Instagram, Facebook	Instagram, burak@bikiangel.com	18.07.17	Rejected	-	-
Anja Zeidler	YouTube, Instagram, Facebook	Instagram	18.07.17	Rejected	-	-
PowerFood	Instagram, Facebook	Instagram	18.07.17	Rejected	-	-
Samanthas.blog	Instagram	Instagram	18.07.17	Rejected	-	-
Philip Leimgruber	Instagram	Instagram	18.07.17	Rejected	-	-
Team-Andro	YouTube, Instagram, Facebook	team-andro.com	18.07.17	Rejected	-	-
Wolf Performance Coaching	YouTube, Instagram, Facebook	Facebook, Instagram	18.07.17	Approved	19.07.17	Facebook

## 7.5 Winners or Raffle

<b>50. Die Umfrage ist hiermit beendet - Ich danke Dir vielmals für Deine Teilnahme! Als kleines Dankeschön fürs Mitmachen verlose ich 3x einen Warengutschein von CHF/EUR 30.00 für Deinen Supplement-Online-Store Deiner Wahl. Um beim Gewinnspiel mitzumachen, brauchst Du lediglich Deine E-Mail Adresse oder deinen Facebook/Instagram- oder Snapchat Namen anzugeben! Viel Glück!!</b>		<b>Winners</b>
<b>Randomizer</b>		
0.56516822	Luca_tucci@hotmail.com	
0.86356242	haris.skenderovic@gmail.com	
0.53724694	alfhonko@gmail.com	3